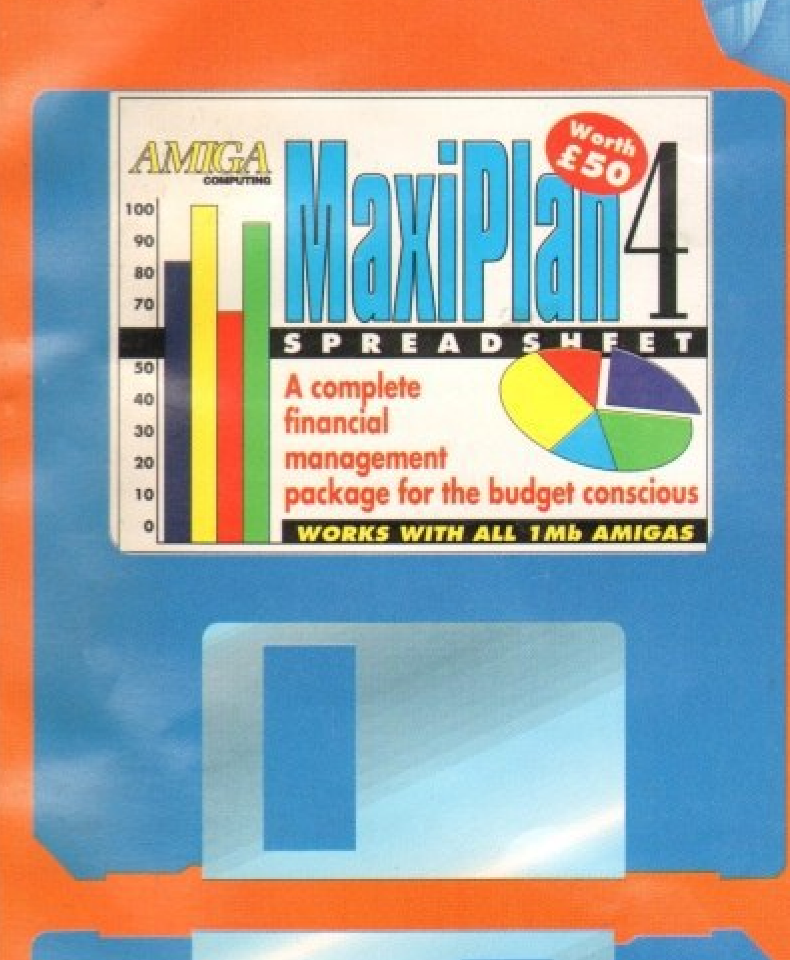
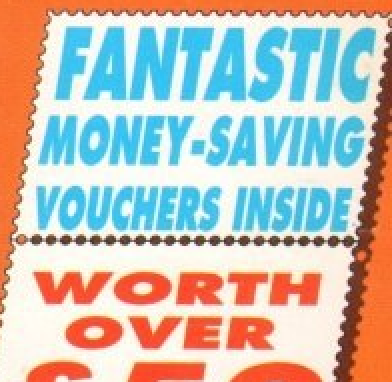
Issue 58 ● March 1993 ● £3.95

AMIGA COMPUTING

Artificial Intelligence ● MBX1200 ● Clarity 16-bit sampler













- Monitor roundup
- PageSetter 3
- Art Expression
- Excellence! 3.0



Award winning innovative products from

Scanners

"If your in the market for a hand scanner then forget the rest and get Powerscan"
Amiga Format July 1992

Power Scanner v3.0



- 100-400 DPI scanning resolutions
- 64 greyscales
- Thru'port for printer
- Award winning editing, image manipulation & scanning software

Power Scanner v3.0 .... £115
Power Scanner Colour £239

Epson GT-6000



- 600 DPI Colour flatbed scanner
- 24-bit colour
- A4 reading area
- Software included

Epson GT-6000 .... £799

Epson GT-8000

- 800 DPI colour flatbed scanner
- 24-bit colour
- A4 reading area
- Software included
- Amazing scan quality

Epson GT-8000 .... £1199

Upgrade Offers

If you consider your scanner system to be inferior to the Power Scanner, we will happily upgrade your software and interface. (Power Scanner is compatible with most scanning heads)

v3.0 Upgrade (inc. interface)....... £49.95
v3.0 Software upgrade for PowerScanner users (send SAE) £15

The Amiga can only display 16 greyscales

Floppy Drives

"This drive contains more gadgets than Batman's utility belt"
Amiga Computing Feb1992

PC880B Power Drive



- Award winning drive manufactured by Power Computing
- Super slim design
- Anti-click (Cures that annoying click)
- Virus blocker (Prevents viruses)
- Built-in backup hardware

PC880B with Blitz Amiga £60
PC880B with Blitz & XCopy £75
PC880B (Cyclone compatible)* £65
PC880B in black case £65

*This drive is only available to registered owners of XCopy Professional. You must provide proof of purchase of XCopy Professional

Power Drives

PC880E Economy drive £49.95
PC881 A500 Internal drive £40.00
PC882 A2000 Internal drive £45.00

Dual Drive

- Two high quality disk drives built into one compact unit
- Same features as PC880B

Dual drive £125

Blitz Amiga

- Backup disks at lightning speeds
- Stops all external drives from clicking
- Contains anti-virus from being written into the bootblocker

Blitz Amiga £20

1.44MB Power Drive

- 1.44MB disk drive
- High density floppy disk drive

1.44MB Power Drive .... £POA

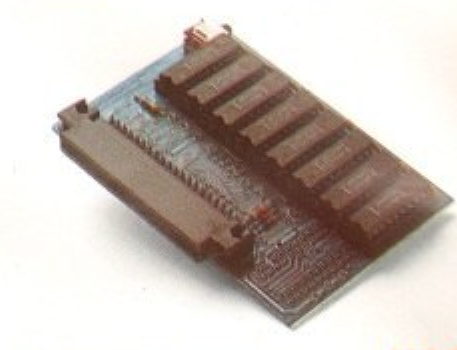
PCMCIA Memory

- Ultra slim memory cards
- 1MB & 2MB
- For A600/A1200

1MB Memory card .... £POA
2MB Memory card .... £POA

RAM Expansions

A600 Memory Cards



1MB RAM with clock £39.95
1MB RAM without clock £34.95

PC501+ RAM Card

Our RAM board is designed especially for the A500+ computer and comes with 1MB of RAM on board to expand your memory to 2MB of chip RAM. Plug-in and go operation (Fits into the trapdoor)

PC501+ RAM card £35.95

8MB for any A500

- Plugs into side slot, fully auto config, full thru'port. Expand 2MB-8MB

2MB £109 4MB £169 8MB £289
1 x 4ZIP chips £14.95

2MB for any A500

- Economy 2MB RAM externally cased
- 16-chip (1 x 1 DIP)
- No thru'port

2MB RAM £79

1.5MB RAM Board

- Fully supports 1MB of chip RAM
- Fully compatible with Fatter Agnus

(Kickstart 1.3 and above, not compatible with A500+)
(Your Amiga needs to be opened, this may effect your warranty)

1.5MB RAM board £75

1MB with Thru'port

- Expand your A500's memory up to a total of 2MB without disposing of your existing 512K upgrade
- Works with 1MB of Chip RAM

(512K RAM must be 4 chip type or not exceeding 9cm in length)
(Your Amiga needs to be opened, this may effect your Warranty)

1MB with thru'port £45

A500 RAM Card

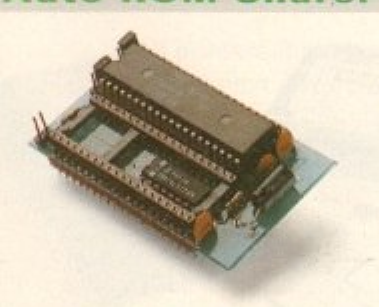
- 512K RAM expansion with clock & free software (A500+ compatible)

512K RAM (4 chip) £29
512K RAM without clock £24
512K RAM (16 chip) with clock £24
512K RAM (16 chip) without clock £19

Power Computing, France, 15 Bld Voltiare 75011, Paris, France. Tel (1) 43386206 (6 lines) Fax (1) 43380028

Power Computing Ltd • Tel 0234 843388

Auto ROM Sharer



- Kick-off is the latest Amiga add-on from Power
- One of the most advanced kickstart ROM sharers available
- A clever design on a small reliable board
- Fits A500 , A500+, A1500
- Kickstart ROM can be selected from the keyboard
- No messing about with switches
- No "CIA adaptor" or other trailing wires
- Jumper to select which ROM boots on switches
- Compatible with old Amiga board revisions
- Simple internal fitting*

* Kick-off requires the lid to be removed from the Amiga. This may invalidate your warranty.

ROM Share	£17.95
ROM Share inc. kickstart v2.04	£55
ROM Share inc. kickstart v1.3	£39
ROM Share for A600	£29

Kickstart v2.04

2.04 Kickstart (chip only)	£39.95
2.04 Kickstart ROM, workbench software, install disk 2.04, font disk & extras	£79.95
2.04 kit with ROM sharer	£99

Video Backup System

- Use VCR as a backup storage device
- Blank video tape is all that is required
- 200 Amiga floppy disks will fit on a 4 hour tape
- Can be used for hard disk backup
- There is room for 175MB of data
- Backup an Amiga diskette in 1 minute
- Restore even to an unformatted disk
- Hard disk backup, software allows you to specify which files and directories to be stored
- Low cost storage, 2 pence per MB
- Menu driven software
- Allows you to watch TV on a 1084s monitor
- Very high reliability
- Log files, contain title and counter position of every backup
- Video connection check, ensures fool proof operation
- Effective error-correction scheme
- Easy to understand manual

Video Backup System £59.95

A500 Hard Drives

GVP A530 Turbo HD



- 40MHz 68030EC accelerator
- Optional 68882 maths co-processor
- Up to 8MB 32-bit FASTRAM on-board
- Award winning

42QMB HD 0MB RAM	£549
80QMB HD 0MB RAM	£649
240MB HD 0MB RAM	£1054
68882 Upgrade kit	£224

GVP Series 2 HD

- Up to 8MB FASTRAM on board

40QMB 0MB	£329	80QMB 0MB	£399
40QMB 2MB	£379	80QMB 2MB	£449
40QMB 4MB	£440	80QMB 4MB	£499
40QMB 8MB	£509	80QMB 8MB	£549

ICD Novia Internal HD

- Fits inside your Amiga 500
- Comes complete, just plug-in and go

Novia 40I 40MB HD	£279
Novia 80I 80MB HD	£349

ICD Flicker Fixer

Flicker Free Video 2

- Stop that annoying flicker
- Fits internally in the A500
- Multi-sync monitor required

Flicker Free Video 2	£199
NEC 4FG Multi-sync monitor	£549

Chips

4MB x 8SIMM	£90
1MB x 8SIMM	£25
256K x 4DRAM	£4.00
1MB x 1DRAM	£3.95
1 x 4 ZIP	£14.95
1 x 4 DIP	£19.95
A3000 Static column RAM	£19.95
SIMM 32 x 1MB-60	£65
SIM 32 x 4MB-60	£243

(These chips cover most memory & hard drives i.e. GVP, Supra, Commodore)

The Power BBS

- Free technical and buying advice
- Thousands of free files available for download
- Great discounts on all Power products
- On-line ordering to ensure speed of delivery
- Conferencing with top computer magazines
- Regular bulletins with latest product information

The Power House BBS 0234 841503

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All speeds up to 16.8K

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- CDTV player
- Welcome disk + caddy
- Keyboard
- Floppy disk drive (black)
- Wired mouse
- Workbench 1.3 and manuals
- Infrared remote control

CDTV multi-media pack	£599
A570 CD-ROM drive for A500	£349

CDTV Software

A Bun for Barney	£29.99
Barney Bear goes camping	£29.99
Battlechess	£39.99
Case of the Cautious Condor	£34.99
CD Remix v2	£34.99
Fred Fish CDPD Collection	£19.95
Fun School 3 (under 5's)	£24.99
Fun School (5-7yrs)	£24.99
Fun School (Over 7yrs)	£24.99
Guiness CDTV Disc of Records	£34.99
Illustrated Holy Bible	£29.99
Music Maker	£34.99
NASA Heroic Age of Space	£19.99
Power Pinball	£29.99
Sim City	£29.99
Trivial Pursuit	£49.99
World Vista Atlas	£54.99
Xenon 2 Megablast	£29.99

More titles available

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Power products come with full technical support

"The **Power Mouse** is my pick of the month" **CU Amiga**

PC880B "Well worth spending your hard earned pennies on, an excellent buy" **Amiga Computing**

Dual Drive "Now this is a bit special" **Amiga Computing**

Power Scanner **Amiga Shopper Best Buy**

Power Scanner **Amiga Format Gold**

"**Power Scan** is quite simply the best Amiga hand scanner available" **Amiga Format**

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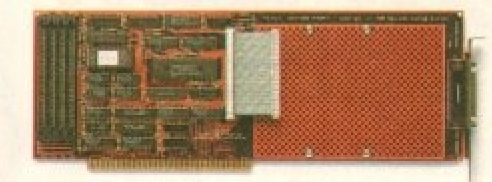
Award winning innovative products from Power Computing Ltd

A2000 Hard Cards

GVP Series 2 HD
- Up to 8Mb SIMM RAM on-board
- Supports external SCSI devices
- 14MHz SCSI controller

Bare £129
40QMB 0MB .£249 80QMB 0MB .£349
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40QMB 4MB .£349 80QMB 4MB .£449
40QMB 8MB .£429 80QMB 8MB .£539

Nexus Hard Card



- Up to 8MB RAM on-board

Bare £129
40QMB 0MB .£249 80QMB 0MB .£349
40QMB 2MB .£299 80QMB 2MB .£399
40QMB 4MB .£349 80QMB 4MB .£449
40QMB 8MB .£429 80QMB 8MB .£539

Bare SCSI Hard Drive

40 Quantum ..£179 80 Quantum ..£229

(Suitable for GVP G-Force, GVP HD or Nexus HC)
Other sizes of HD available, please call

RAM Expansion
- Aries A1500 / A2000 RAM

2MB .... £129 6MB £209
4MB .... £169 8MB £249

Macintosh Emulator

"This really is the best emulator we've seen for the Amiga. It behaves just as if you really were using a Mac"
Amiga Format Sept 1992

AMax-II Plus
- Amiga 1500 and above
- Runs Mac software
- Runs System 7
- Full support for all SCSI Mac peripherals and the ability to read Mac disks in your drives
- 68020/68030 compatible
- AppleTalk emulation
- Can use Amiga ECS
- Easy to install

AMax-II Plus £229
(Mac ROM chips required)

24-Bit Colour

OpalVision
- 24-bit graphic card
- 16.8 million colours available
- Operates in all standard Amiga resolutions
- VLSI Microcode graphics co-processor
- Double buffered 24-bit and 15-bit animation is available in all resolutions
- 'Palatte-mapped' design updates screen colours in real-time. Fade pictures in and out and change their palettes
- Equipped with 1.5MB of display RAM
- Auto-config for NTSC or PAL
- Available for all Amigas

Software included

OpalPaint
- 24-bit painting and image processing

OpalPresents
- Presentation program
- Control OpalVision images, Amiga graphics and live video
- Includes fades, effects etc.
- Many more features

King of Karate
- 24-bit computer game
- Exciting karate competition
- Demonstrates OpalVision capabilities

OpalVision £699
More information available
OpalVision roaster chip available soon

Monitors

"For a monitor of this quality, the CM8833 is worth every penny"
Amiga Format Sept 1992

"The 4FG is an absolutely smashing monitor that beats every competitor"
Amiga Format Sept 1992

Philips CM8833 Mk2
- With cable
- Available with Lotus Turbo Challenge 2
- On-site maintenance



CM8833 Mk2 .... £199

NEC Multisync 4FG
- For use with Flicker Fixers
- Very high quality
- Built-in degausser
- 15" Screen

NEC Multisync 4FG £549

Optical Hard Drive



- Manufactured by Power Computing
- 128MB on one optical disk
- Read and write optical disks
- 40ms running speed
- Built-in power supply
- High power cooling fan
- 25-way and 50-way SCSI ports
- Thru'port built-in
- SCSI ID switch
- Compatible with major SCSI controllers

128MB optical drive (Internal) £729
128MB optical drive (External) £999
128MB 3.5" optical disk .... £39.95 each
SCSI controller card
for A1500 / A2000 .... £129
(Compatible with Amiga, PC, and Mac. A SCSI controller is required on the Amiga and PC)

Floptical Disk Drive
- Stores 20MB on one 3½" disk
- Cost effective mass storage unit
- Can be used as a 1.44MB floppy with Amiga DOS and AMAX
- AMAX compatible with DMI Mac driver
- Packs an entire back-up onto one floppy
- Additional disks available
- Internal version for A1500/2000/3000
- External version for A500
- SCSI Interface required

Internal A2000 kit £289
Internal A3000 kit £289
External A500 kit £389
A1500 .... £599

Accelerator

GVP G-Force
- 68030 accelerator board
- 68882 Maths co-processor
- DMA SCSI controller on-board
- 68000 fall-back mode
- Only CPU slot is used
- Internal and external SCSI connector
- Converts to hard card with Hard Drive mount kit
- 32-bit RAM as standard

25MHz 1MB RAM £529
40MHz 4MB RAM £759
50MHz 4MB RAM £1249
Hard drive mount kit £35



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Tel 0234 843388

Printers

All printers include cables and next day delivery

Star Printers

LC200 colour	£199
LC24-200 mono	£239
LC24-200 colour	£289

Citizen Printer

Swift 24e (includes colour kit and AMI)	£279

Epson Printers

Laser

EPL-4000	£639
EPL-4300	£799
EPL-8100	£1349

Inkjet

SQ-870	£509
SQ-1170 (132 column printer)	£629

Dot Matrix

LQ-570	£289
LQ-1070 (132 column printer)	£449



LQ-100	£209
LX100	£189

Supra Modems

Supra Fax Modem Plus	£129
Supra Fax Modem v32Bis	£275
Supra Modem 2400 (External)	£75
Supra Modem 2400 ZIplus (Internal)	£134
Supra 9600	£210

Miscellaneous

Power Mouse	£15
Optical Mouse	£29.95
Replacement optical mouse mat	£9.95
10 Maxell disks, optical mouse, Zipstick	£45
Maxell multi-colour disks (10)	£9.95
Floppy disks bulk	£POA
Aviator 1 joystick	£35
Intruder 1 joystick	£29.99
Maverick 1 joystick	£15.99
Python 1 joystick	£9.99
Apache 1 joystick	£7.99



Colour PowerScan

The Power Computing colour hand-held scanner for the Amiga is now available. This scanner offers the following features

- 4096 colours
- 50-400 DPI
- 4 Scanning modes
- Text
- Greyscale
- Colour halftone
- Colour

The Amiga interface plugs into an A1500/A2000/A3000/A4000 expansion slot with a separate version which connects to the expansion connector of the A500/A500+. The A500 version has a through-port which is compatible with all Amiga 500 expansion peripherals.

The software supplied with this scanner is the new PowerScan Professional 3, which also supports the greyscale scanner and will be available as an upgrade to existing users of PowerScan for £15.

Colour PowerScan v3.0 features

- Real-time 'True-feel' scan option in colour halftone mode
- Images are stored internally as 12-bit graphics, not HAM. This means that no quality is lost due to the Amiga only being able to display HAM images in 4096 colours
- Images are displayed as HAM pictures
- HAM images may be loaded from disk and edited using PowerScan 3
- Image size that can be handled is limited only by the amount of memory available
- Memory does not have to be chip memory as in many art packages
- Images can be saved in various file formats
- View whole image function
- Scale/rotate/skew image or clipboard by any amount
- Crop image
- Clean up, lighten or darken image
- Variable zoom mode
- Draw freehand, lines, circles, boxes and polygons in various fill patterns, brush sizes, paste modes, or with the clip board image
- Clipboards may be scanned directly, or any shape can be cut from the main image
- The software is compatible with all Amigas
- Supports Workbench 2 and ECS screen modes

Colour PowerScan now available

New v3.0 Scan software

PowerScan Colour v3.0	£239
PowerScan Greyscale v3.0	£115
PowerScan v3.0 software upgrade	£15

The Amiga can only display 16 greyscales

Distributor for Power Computing in Italy, D.R.R. SRL 00142, Roma. Via Duccio Di Buoninsegna Tel (06) 5193481/482 Fax 5040666

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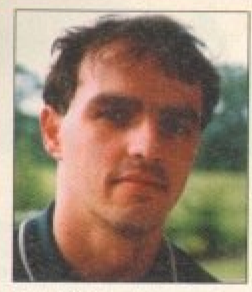
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Unit 8 Railton Road
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Parcel post delivery £1
(Not for orders over £50)



With 1992 fast receding and the novelty of a new year wearing thin, *Amiga Computing* looks this month into the Amiga's immediate future.

Unlike some other magazines, however, we won't try to predict which Amigas will and will not be launched, mainly because the experience of last year's "will they, won't they" speculation over Commodore's intentions should be enough to discourage all but the most misty-eyed horoscope fans.

Instead, we've decided to continue the magazine's policy of picking out the most important new releases, both in software and hardware, for detailed review with an eye to the product's importance to the Amiga as a whole.

This month's crop includes Clarity, the Amiga's first 16-bit sound sampler, the first A1200 FPU add-on (see Amiga Market), the first full colour DTP package, and a look at the latest wordprocessor.

To top this off, we attempt to demystify the Amiga versus PC debate. By taking an upgraded A1200 and an equivalent PC setup, we show that the misery-mongers who would have us believe the PC is both technically superior and better value for money are completely wrong.

Predictable? Perhaps, but only because the Amiga is far and away the better machine, not because of any bias on our part.



WHO'S WHO

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0625 859766
Thursday, 2-5pm only

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For four years *Amiga Computing* has been the leading magazine for Amiga enthusiasts. As a key member of the Europress magazine group, *Amiga Computing* promises to inform, educate and entertain its readers each month with the most dedicated coverage of the Amiga available.

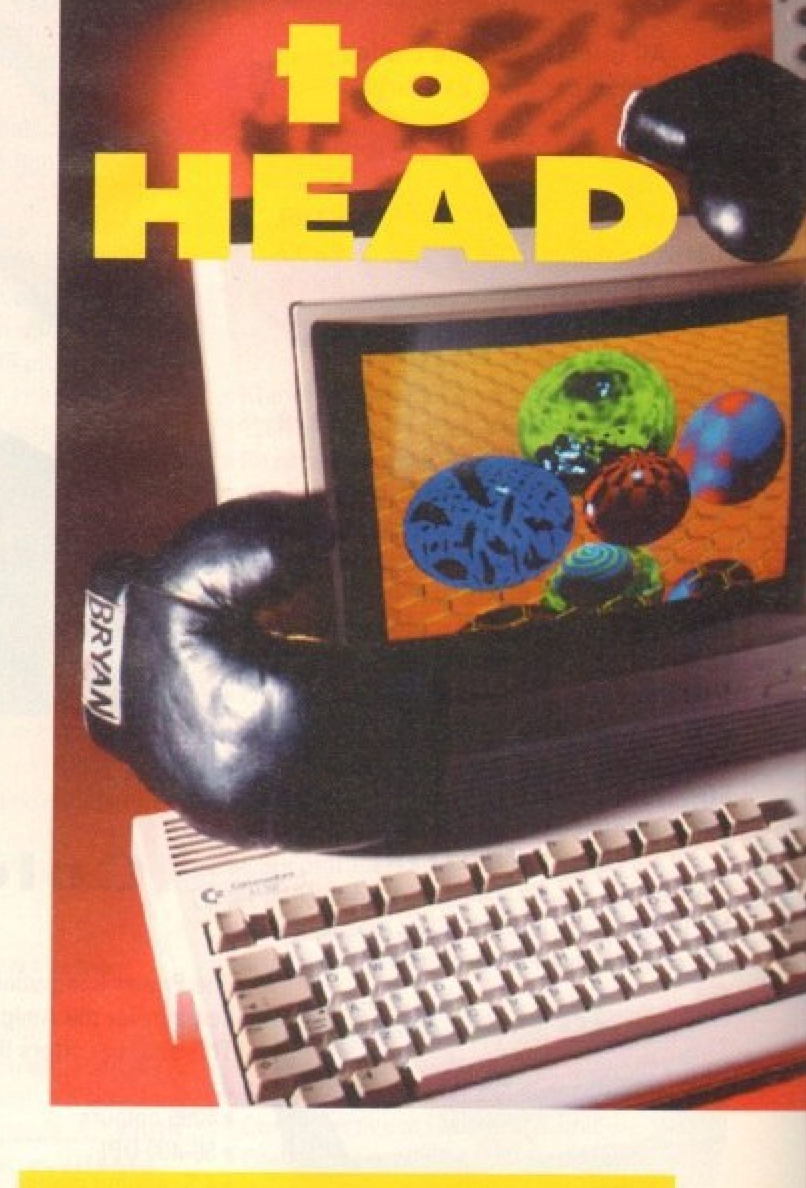
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REGULARS

COVER STORY

HEAD to HEAD

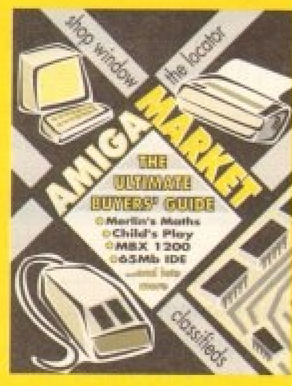


MBX1200

IDE hard drive

Amstrad NC100

Roclite floppy



It's all in AMIGA MARKET

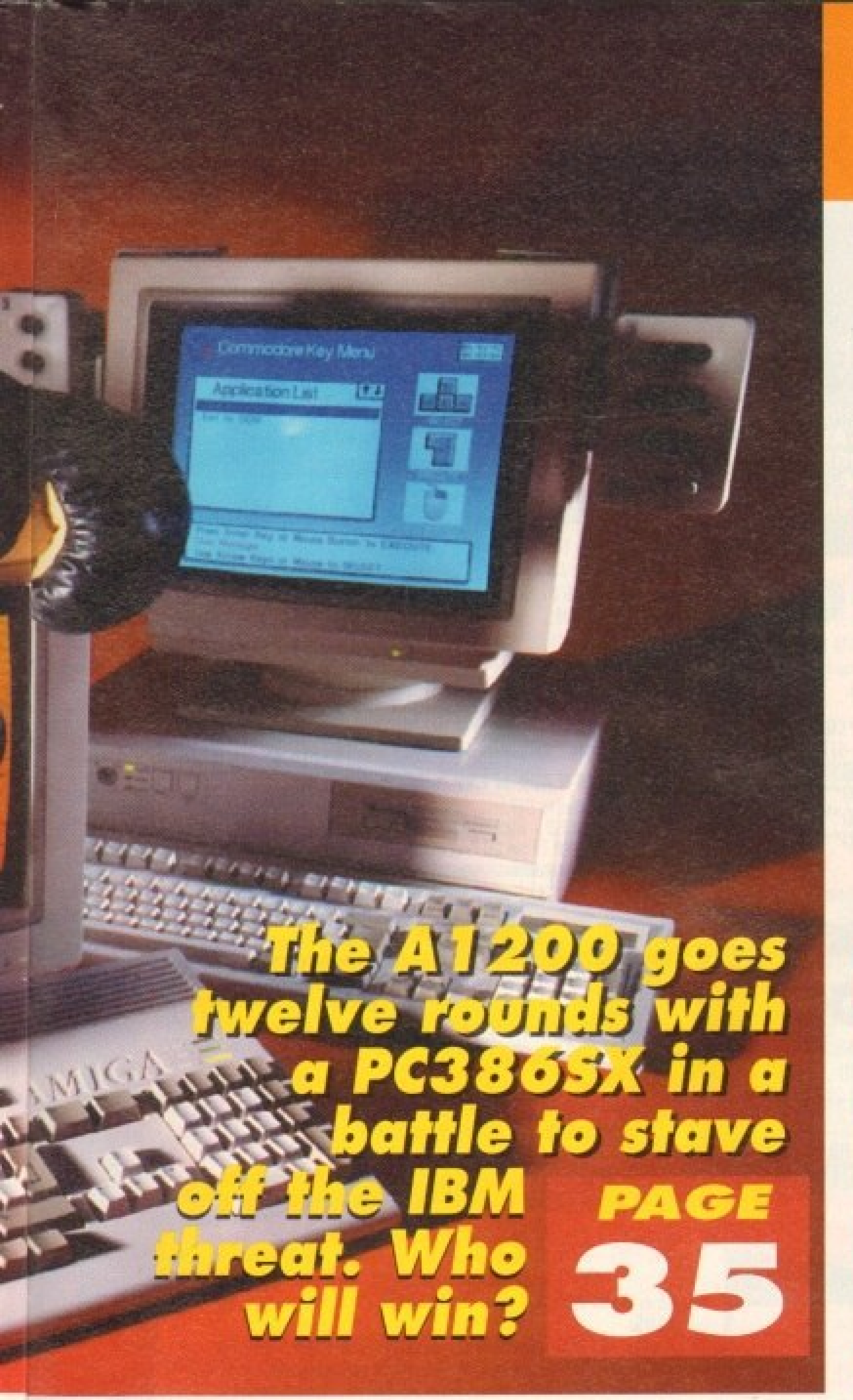
Try our classified ads for those tempting bargains, Shop Window for the latest software and hardware, or turn on the Software Spotlight for expert guidance on the best around. There's also our unique Product Locator to help you find that elusive bargain in no time at all.

Turn to page 157

amiga almanac

Nine pages of applications for the Amiga

CONTENTS



The A1200 goes twelve rounds with a PC386SX in a battle to stave off the IBM threat. Who will win? PAGE 35



GAMER PAGE 103

The best of the latest games, plus previews, news and playing guides

Don't miss our fantastic offers for subscribers

see page 64 now!

THE COVERDISKS

Page 23



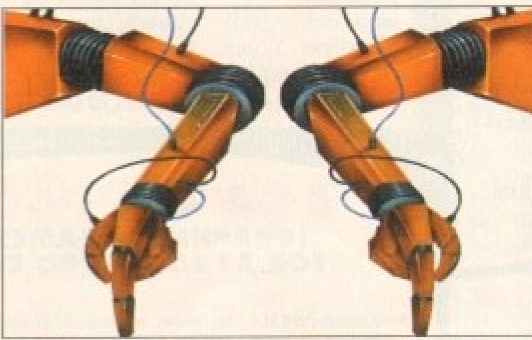
FREE!
Maxiplan 4! A fully featured, powerful spreadsheet and budgeting package that'll keep track of your pennies

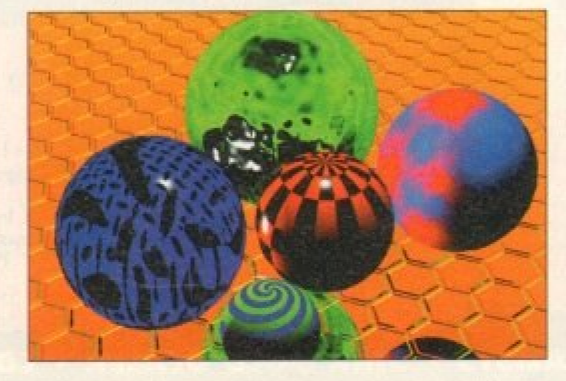
FREE!
Stereo Master! Superb sound sampling software with a pound-saving money-off offer you'll find hard to resist

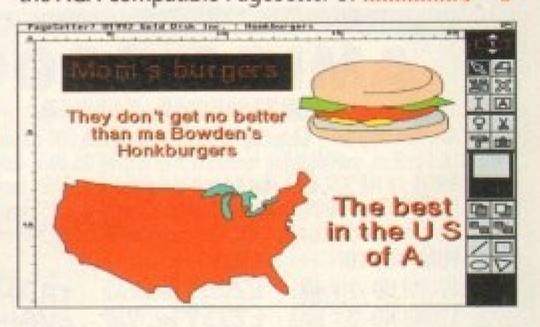
This month's double disk package is designed with both the money-conscious home user and the musician in mind. Maxiplan 4, with its easy to use interface and graph-generating facility, makes money management quick and easy.

Stereo Master is one of the Amiga's most popular 8-bit samplers, and the software for this impressive package is free on this month's disk. If that's not enough for you, a great reader offer enables you to buy the hardware cartridge and join the music scene for only £14.95.

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Due to the exchange rate, many items in this ad will increase in price - including some CBM, HP + Philips product.
At the time of going to press we are unable to confirm the extent or date of the increases, therefore, all prices must be confirmed by telephone before ordering.

HOW TO USE THIS AD

For the first time ever, you can choose your own Amiga and software combination, and still benefit from the huge savings only available from package deals. Want an A500 with 1500 software? No problem! Like an A1500 without games? It's up to you! All we ask is that you choose at least 1 software pack when you order your hardware (optional on CDTV, A1200, A3000 or A4000)

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A1500s FROM £299

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A600 20HD (mint)	219	40MB	FROM 199
A3000s	FROM 899	120MB	FROM 379
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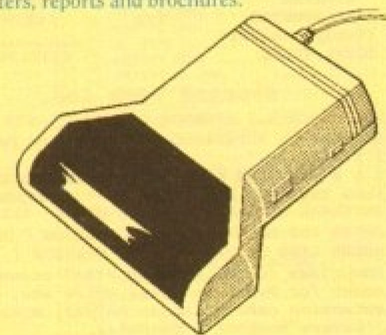
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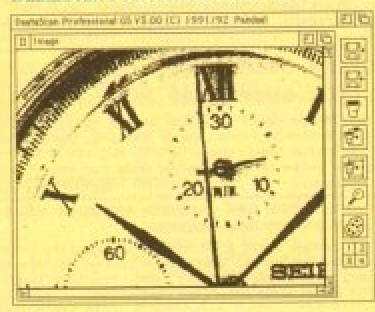
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The Great British Amiga Rip-off

by John Butters

THE British are being forced to pay more for Scottish-built Amigas than buyers in other parts of Europe, *Amiga Computing* can reveal.

The story comes as the pound sits at a low level against other major currencies, and only a few weeks after Commodore held off slapping a £30 price increase on their computers.

During our investigation we found that Germans can buy standard A1200s for about £320 – £80 less than Brits – and those on the look-out for an A4000 save a massive £500.

The same is true in some other neighbouring countries – in France, for example, A600s are widely available at its computer dealers for around £250. Only a few High Street giants can match that in Britain.

But the good news is that Single Market laws introduced at the beginning of the year mean it is now easier than ever before for travellers to bring computers into this country.

An official at H M Customs and Excise in Salford, Manchester said that providing the product is for the importer's personal use, no extra tax is paid upon arrival from other parts of Europe.



A4000: £500 cheaper in Germany

And technical experts say that apart from different keyboard layouts and a slightly lower power requirement, the continental machines are very similar.

Keyboard configurations can be changed through Workbench preferences and the power difference of up to 20 volts would not be dangerous.

The real problems would arise if the computer became faulty. It is less convenient to return the equipment and there might be weak support.

But before Amigas were built in Irvine, Scotland, Commodore said they did not make extra profits on computers sold in Britain.

The manufacturer said they had to pay for the computers to be imported and one benefit given to British Amiga buyers – and not available in other countries – is the year's on-site warranty.

No-one from the firm was available for comment on these new findings.

Psychologist raps epilepsy scare stories

A BRITISH psychologist has hit out at tabloid newspapers which recently carried "scare-mongering" headlines claiming computer and video game playing can trigger epileptic fits.

"Nintendo Killed My Son", screamed the front page of *The Sun*, about a boy with a previous history of fits who allegedly collapsed and died after playing a Super Mario game.

The boy's mother was quoted as saying: "If it can happen to my child it can happen to anyone."

***The Daily Mail* said games "should be redesigned to eliminate the risks of causing fits in children".**

And even *The Sunday Times* reported City fears that health scares might cause the computer games bubble to burst.

But one person who suffered from the condition and who has researched its effects is psychologist Dr Cliff McKnight of the HUSAT Research Institute at Loughborough University.

"To suggest computer games cause epilepsy is nonsense – at best it indicates poor reporting and at worst it is simply scare-mongering," he said.

Dr McKnight says the games themselves are harmless but flickering TV screens used with computers and consoles could affect some of Britain's 20,000 photosensitive epilepsy suffers.

It is only under this form of the condition that seizures are triggered by visual stimulation – such as TVs – and it can only affect those with an existing tendency or problem.

Fits can also be triggered by such things as the slow-down lines painted on roads before some roundabouts, tree-lined French roads with the sun shining through trees and disco lights.

"Many hundreds of thousands of games computers were sold over Christmas – almost exclusively for use by children who tend to sit close to the TV when playing a game," Dr McKnight added.

"It's not surprising from a statistical point of view that some cases of epilepsy have become apparent, but this is certainly no excuse for the way certain tabloid newspapers have distorted the facts in order to create a more dramatic story."

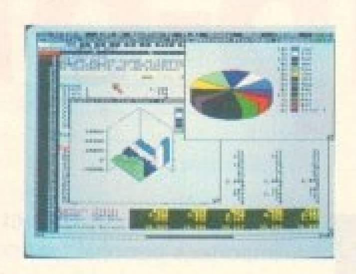
And the British Epilepsy Association have also slammed the newspapers' reports. Chief Executive Terry O'Leary says that the "panic and fear is misplaced."

They have produced a leaflet on photo-sensitive epilepsy and an information sheet about televisions and computer displays which can be obtained from their helpline on 0345 089599.



Games: Epilepsy scares follow console boom

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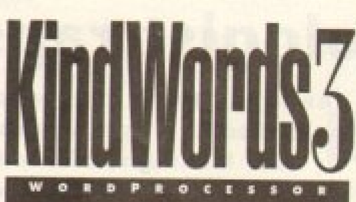
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Cheque, Visa, Master Card, EuroCard, Switch and Money Orders are accepted. DO NOT SEND CASH. Make cheque payable to : The Disc Comapny (UK) Ltd.

Send to : THE DISC COMPANY (UK) Ltd., C/O IMEDIAT, B3, Edison Road, St. Ives, Huntingdon, PE 17 4LF, United Kingdom. Allow three weeks for delivery.

For additional information, demonstration disks, or brochures visit your Amiga dealer

Both upgrades require : Amiga 500, 500+, 600, 600 HD, 1000, 2000, or 3000, Workbench 1.3 or 2.0, 1 MB RAM (additional memory recommended). Two disk drives or hard disk recommended.

* Suggested retail price.

Personal touch for artists

BUDDING artists will soon be offered a new paint package which is claimed to take full advantage of the Amiga's original and advanced graphics

British distributor MicroPace (0753 551888) also say Personal Paint offers sophisticated image processing functions, programmable effects, intelligent colour reduction and remapping.

Other features include up to nine brushes, a text editor, colour fonts, two different working environments and a customisable user interface with sound effects.

A disk containing 256 colour images is to be supplied with the program, which has a price tag of £59.99.

Power cut causes A1200 problems

A CHANGE to the design of the external floppy disk port on A1200s means that people upgrading from older Amigas are finding some of their existing peripherals incompatible.

The port – although similar to the eye – used to be supplied with both 5 and 12 volts of power. The new Amiga has only 5v, and gadgets needing the extra power will not work.

Among hardware likely to have difficulties are some older external disk drives and a few video digitisers. Several firms' products are affected.

Commodore's technical department said that with recent improvements in disk drive mechanisms, the 12v power supply is no longer required.



A1200: Some old Amiga peripherals incompatible

Launches planned for Wembley

AS THE final preparations are put to the forthcoming International Computer Show, details of new Amiga products due to be shown have emerged.

Heading the line up at the *Amiga Computing*-sponsored Wembley show, HiSoft promise to unveil at least two new software packages.

They include v6 of the SAS/C compiler development system for AmigaDOS, intended to provide users with a "responsive, controllable C compiler".

Devpac 3, the latest version of the firm's assembler programming software will also be shown.

Added features include a new multiwindow editor with bookmarks for remembering key positions. Education specialist LCL will be at the exhibition to launch the first computerised national curriculum integrated science course.

Micro Science takes eight-year-old beginners up to GCSE level, and can then be used as a revision aid for physics, chemistry and biology examinations.

Power Computing, meanwhile, promise to have plenty of new Amiga hardware on display. Among the line-up will be Epson's new flatbed scanner, hand scanners and A1200 memory.

Other firms due to attend are New Dimensions, Silica Systems, PD Soft and Coombe Valley Software.

The show will be held on February 19 to 21.

DO YOU KNOW SOMETHING WE DON'T?

Although *Amiga Computing* has scores of contacts in the Amiga world we need you. If you have some hot news ring John Butters on the news desk now on 0625 878888 or fax to 0625 879966. All information supplied will be treated in the strictest of confidence.

Scala faces competition

MEDIALINK 3 is the name of a new package set to take on the might of Scala in the Amiga multimedia market.

Programmed by 1001 Software Development, the firm says the menu-driven software is ideal for designers of time-based applications such as standalone presentation systems.

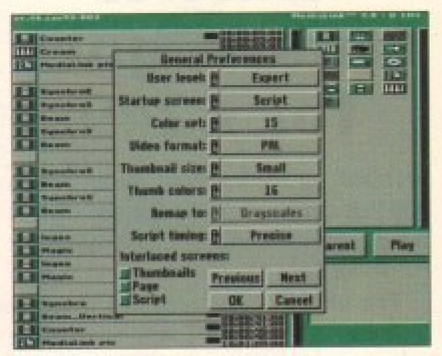
And they claim that interactive programs can be put together in a short period of time, with shorter scripts than similar ones made with the program's competitors.

It contains smooth anti-aliased fonts and features line-by-line and page transitions, real-time loading from hard disk of larger than memory animations and a time base counter.

Other features include 24-bit output, ARexx, multitasking, sound module playing, plug-in objects and Workbench 3 compatibility.

"Multimedia should be practical, it should work on inexpensive hardware and it must deliver solutions, not problems," said a 1001 Software Development spokesperson.

To be distributed in Britain by Alternative Image (0533 440041), it will cost approximately £300.



MediaLink: new Amiga multimedia software

Alternative make some Real changes

ALTERNATIVE Image (0533 440041) are set to release an improved version of Real 3D, and slash the cost of the existing package – v1.4 – to around £60.

Major additions found in v2 are a new customisable user interface and a line up of animation features never seen before on the Amiga.

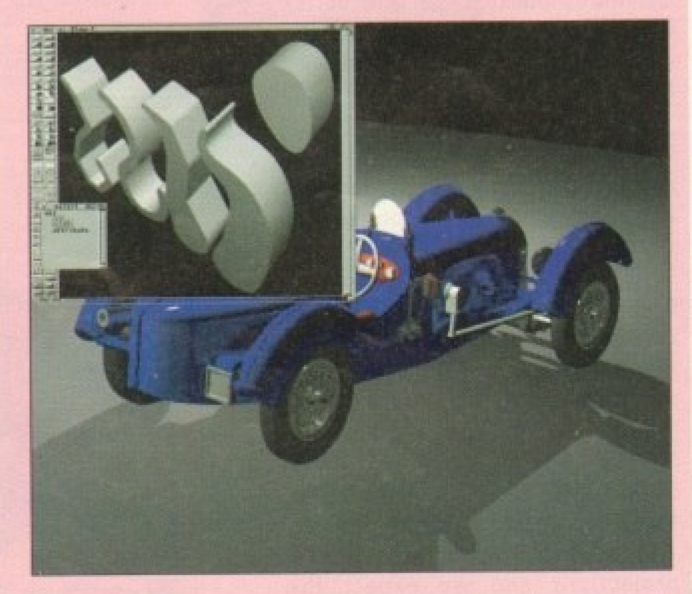
Customisable Environment and Expandability is the full name given to the software's interface. It enables users to edit, save and use a newly-designed user interface or load a favourite.

The CEE's flexibility allows the user to expand the program by editing screens or windows, and by defining new functions that can be added to menus, icons and keys.

And the new animation system contains features such as object morphing, particle and procedural animations, texture and material morphing and animated textures and backdrops.

Also available is skeletonal control and continuous time or frame-based animation descriptions. Effects include motion blur, magnetism, sun glow effects and blurred reflections.

The price remains to be fixed but a spokesman for Alternative Image gave it as approximately £300.



Real 3D: version 2 has top animation features

Compatible again..

A NEW program available from some European computer clubs aims to solve many of the incompatibility problems caused by recent Amiga OS upgrades.

Believed by experts to be illegal, the software enables A500P, A600 and A1200 users to boot their machines with the early Kickstart 1.3 and appears to even downgrade the graphics.

Once installed, Kickstart 1.3 will remain in the Amiga's memory until the machine is turned off and enables previously incompatible software – including games – to be loaded. Although two East Europe-based firms are credited for the program's development we have been unable to contact either.

One technical expert described it as a "remarkable little program" but added that it is similar to the shareware program ZKick which does not work with the latest Amigas.

Editing range improves

EDITMAN Super is an improved range of products designed to enable video enthusiasts to use their Amigas to control a VCR or video camera for editing.

With the ability to import graphics and captions while editing, the latest models now handle animation and provide A/B roll editing facilities with programmable fades and so on.

Versions higher in the range have extra options such as 24-bit graphics and video FX. Developed by Syntronix DTV (0332 298422), Editman's price starts at £399.

Drawing with Soft-Logik

SOFT-LOGIK, developer of desktop publishing package PageStream, have now released an Amiga structured drawing program called Art Expression.

Its editing tools give users the ability to add, delete, move, join, split and align points in objects and there are also tools to close paths, create text objects and change file magnification.

And among its special effects features, text can be aligned to curves or warped inside any shape, and objects and colours blended for realistic shading and shape metamorphosis.

Desktop publishers are offered the ability to convert and load files from many Professional Draw, Aegis Draw, Pro Vector and Adobe Illustrator, as well Art Expression's PostScript files.

The Missouri-based firm have chosen MicroPace (0753 551888) as their British distributor and have set a price tag of £144.99.

Cartoon Classics bundle goes for £249

ANYONE on the look out for an Amiga 500 Plus can now buy the Cartoon Classics bundle and an extra pack containing four games for just £249.

The offer comes from dealer Silica Systems (081-309 1111), who promise the computers are official UK models and are supplied with full warranty and support.

The A500P is supplied with Deluxe Paint III, Transwrite and games Lemmings, Captain Planet, Zool, Pinball Dreams and Striker.

Spokesman Andy Leaning: "With recent exchange rate fluctuations, most news recently has been of manufacturers increasing their prices.

"Silica are pleased to stop this trend for a while and announce a special offer which sees the Amiga 500 at its lowest ever price."



Cartoon Classics: A500P for just £249

New drives from distributor

LEADING distributors including ZCL and SDL could soon become Commodore-approved A1200 hard drive suppliers, *Amiga Computing* has learned.

Under such an arrangement, customers would be able to buy the state-of-the-art computers already fitted with drives, and without the machine's warranty being affected.

It is planned that drives with different levels of storage capacity will be sold, and installation software and cables will be used. And Wang – the firm appointed by Commodore to carry out Amiga repairs – will be authorised to fix faulty drives fitted to the computers before their sale.

So far only Silica Systems (081-309 1111) have announced details of a model they will be selling. They say an A1200 fitted with an 85Mb Maxtor drive will cost £698.

The drive will be supplied with Great Valley Products installation software and leads.

Typography from AGFA

AGFA have just brought out two typography packages as part of a policy of making their entire library of Intellifont scalable typestyles available in Amiga format.

The Amiga Starter Pack II is a collection of typefaces for desktop publishing and wordprocessing applications.

It includes a range of typestyles including CG Times and CG Triumvirate, together with Park Lane and Brush scripts and Futura and Shannon Extrabold for headlines.

And 25 typefaces used in the advertising, commercial and broadcasting industries are contained in the Video Series Pack.

Using the software Amiga users can drop type into graphics and manipulate composite images without losing resolution.

Prices were unavailable at the time of going to print. Agfa can be telephoned on 081-560 2131.

A570 price slashed

COMPACT disc drives are now financially in reach of many more Amiga users following a £100 price drop just announced for the A570 by dealer Silica Systems (081-309 1111).

Under the promotion – set to run until the end of the summer – buyers will be able to get hold of the Commodore drive and a free copy of Sim City on CD for just £249.

"The CD format is growing in popularity and more and more games appearing on CD are far superior to traditional floppy disk-based games," said Silica's Andy Leaning.

"It won't be long before Amigas without CD drives will miss the best games. Our sale offer is intended to encourage as many users as possible to benefit from this new format."

Meanwhile, the dealer has also announced a price cut to £39.95 for Great Valley Products' 8-bit sound sampler DSS. The package contains hardware, an editor and a sequencer.



A570 – price down to £249

Vortex find British home

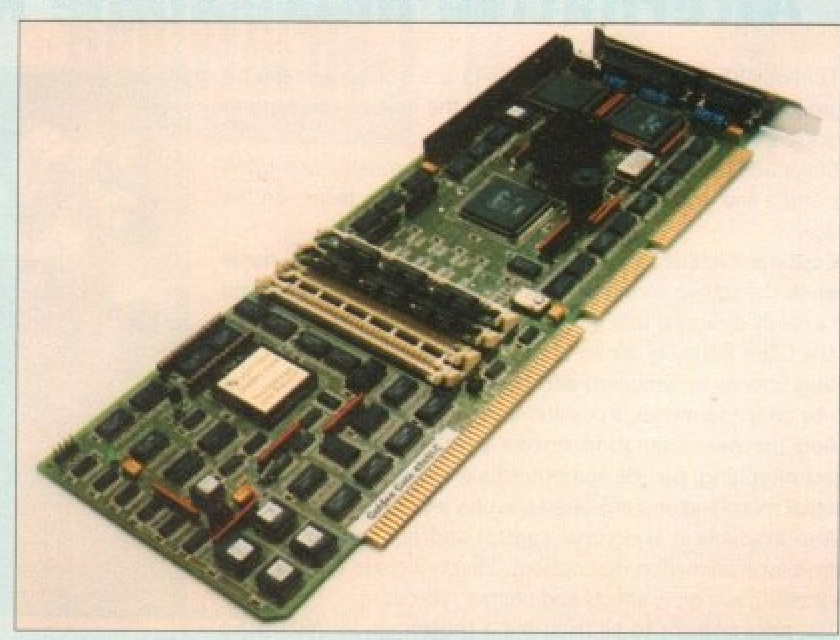
GERMAN emulation specialist Vortex Computersysteme have established a new distribution arrangement with MicroPace (0753 551888).

MicroPace were chosen as Vortex's British representative because of their ability to offer quick delivery, technical and sales support and a complementary product line.

At first three products will be offered by the Slough-based firm – Golden gate 386SX, Golden gate 486SLC and Monitor Master, an automatic monitor switch box.

"These boards bring an exceptional level of performance capability and opportunity to Amiga user," said MicroPace's Marios Margaritis.

"The 486 has beaten our initial sales projections and we expect the excitement to continue."



Golden Gate: Now distributed by Micro-Pace

Publisher adds to Amiga titles

BRUCE Smith Books (0923 894355) have this month added two more publications to their growing range of Amiga titles.

As its name suggests, *The Insider Guide to the Amiga 600* is a tutorial about the computer, touching on Workbench, utilities, preferences and AmigaDOS.

The 256-page book contains 55 graphical step-by-step guides, each concentrating on an important or common task which the Amiga user has to carry out. Cost: £14.95.

The company's second release is *Mastering Amiga ARexx*, a 320-page guide to the Rexx programming language adopted as part of Workbenches 2 and 3.

Its topics include how to install ARexx on any Amiga, introductions to the language, its main features and explanations on how ARexx is used to control other programs.

There are also details of ARexx's built-in functions and support libraries, methods for creating programs and an introduction to advanced AREzx programming topics.

Supplied with a support disk, it is priced £21.95

New show planned for Midlands

MIDLANDERS are targeted for a computer show due to be held at Telford Exhibition Centre on March 6 and 7.

Organisers Nelton Exhibitions promise the area's largest ever line-up of computers, games, hardware and accessories to be put under one roof.

Said Nelton's Tony Cox: "It is high time that this part of the country began to get its own consumer shows.

"We knew we had this computer shopping spectacular aimed at the right market, but even so we have been surprised by the response from both exhibitors and potential visitors"

DIARY DATES

19 to 21 February 1993
7th International Computer Show
Organiser: Westminster Exhibitions
(081-549 3444)
Venue: Wembley, London
An *Amiga Computing*-sponsored all formats event.

25 to 28 March 1993
Ideal Electronic Games Show
Organiser: Ideal Home Exhibition
(061-432 2642)
Venue: Earls Court, London
A new section added to the Ideal Home Exhibition.

4 to 6 April 1993
European Computer Trade Show
Organiser: Blenheim
(081-742 2828)
Venue: Business Design Centre, London
New software and hardware is previewed to the industry. No public admission.

23 to 25 April 1993
Midi Music Show
(081-549 34444)
Organiser: Westminster
Catch up with the latest Midi products.

16 to 20 September 1993
Live '93
Organiser: News International
(071-782 6000)
Venue: Olympia, London
A public consumer electronics show. Commodore plan to attend.

24 to 31 March 1993
CeBit
Organiser: Deutsche Messe
(010 49 511890)
Venue: Hanover, Germany
A massive electronics show which has been used for the launch of many new products including the A600.

Speed increase for A2000

AMIGA 2000 users can now increase the speed of their computer with a new 68030 processor board just developed by Interactive Video Systems.

The firm claims Vector to be one of the most versatile accelerators available because of its "high performance features".

Options include 25, 33 or 40MHz versions, a socketed maths co-processor, on board memory expansion up to 32Mb and four or 8Mb of memory available to the 68000.

It also has a built-in SCSI controller and external SCSI pass-thru. A SCSI share networking feature allows storage systems fitted to the machine to be shared among several computers.

Once fitted software enables the Amiga to switch back to the 68000 processor. Prices are available from UK distributor MicroPace on 0753 551888.

Easier refills for inkjets

USERS of inkjet printers can now buy refills from Memorex, who have just added a nine refill product range to their existing line of computer accessories.

Compatible with Canon, Epson and Hewlett Packard machines, the refills are claimed to offer an ease of use that printer users have long been seeking.

Manufactured by Pelican, the cartridges are designed with a hole in the top and a syringe is provided.

Users find ARexx help

AIMED at bringing less experienced Amiga users quickly up to speed in ARexx and to provide some ARexx programs which can be adapted for use in applications is the *ARexx Cookbook*.

Written by Merrill Callaway, the tutorial is a step by step guide to the subject and the example programs are described as doing useful tasks, such as scaling .IFF images to screen size.

The standard package containing the ARexx Cookbook and a single disk costs £29.95, and a Deluxe Set supplied with an additional companion disk is priced at £35.95.

Order from Premiervision at 31C Herne Hill Road, London SE24 0AX or telephone 071-274 4407.

News Briefs

● *GUIDE to AmigaDOS* is a package containing videos, books and software which has been designed to help enthusiasts become familiar with the subject.

Available for all versions of Workbench, it can be bought from New Image Videos at Department MS2, The Studio, 10 Grange Avenue, Scarborough YO12 4AA.

● SOME mistakes unfortunately made their way into January's round-up of Amiga mice. The correct telephone number for Logitech is 0344 891313 and the firm's Pilot Mouse costs £28.20.

● CONTRARY to a story in the January issue of *Amiga Format* magazine, Futuretech Consumer Electronics of Newport Pagnell have not gone into liquidation and are trading as normal.

● ENTHUSIASTS on the look out for new Amiga software and hardware can now obtain a free guide to many of the products available.

Published by Silica Systems (081-309 1111), the 64-page booklet gives details on every products distributed by the firm and pictures of each.

● FOUR new volumes have been added to Words and Music's collection of Amiga Classical Midi file format disks.

They can be loaded into any sequencer which supports standard Midi files, and are mapped to the GM/GS standard for instant playback.

Costing £10.95 each, all four can be ordered for £37.95. For more information on their contents telephone the company on 091-529 4788.

● E M Computergraphic (0255 431389) have become approved suppliers of the two-disk OpalVision update to British and other European users.

Costing £5.99, it contains OpalPaint 1.4, OpalPresents, OpalHotkey, OpalAnim Utilities, OpalLibrary, new paper types, artist tools, draw modes and OpalVision's AdPro display module.

Charity help sought

CHARITY Soft is a non-profit making computing organisation just set up to help a selection of registered children's charities.

They are now on the looking out for programmers of any age or experience who would like to work on a freelance basis, and would welcome new programmers.

Various computer formats including the Amiga will be supported by the project, which aims to produce games in the first instance but might later extend into business-type software. Contact Michael Moseley on 0840 770935.

Graphics course planned

A TWO-day course for those interested in becoming more familiar with Amiga graphics and animation is to be held at Hammersmith, London soon.

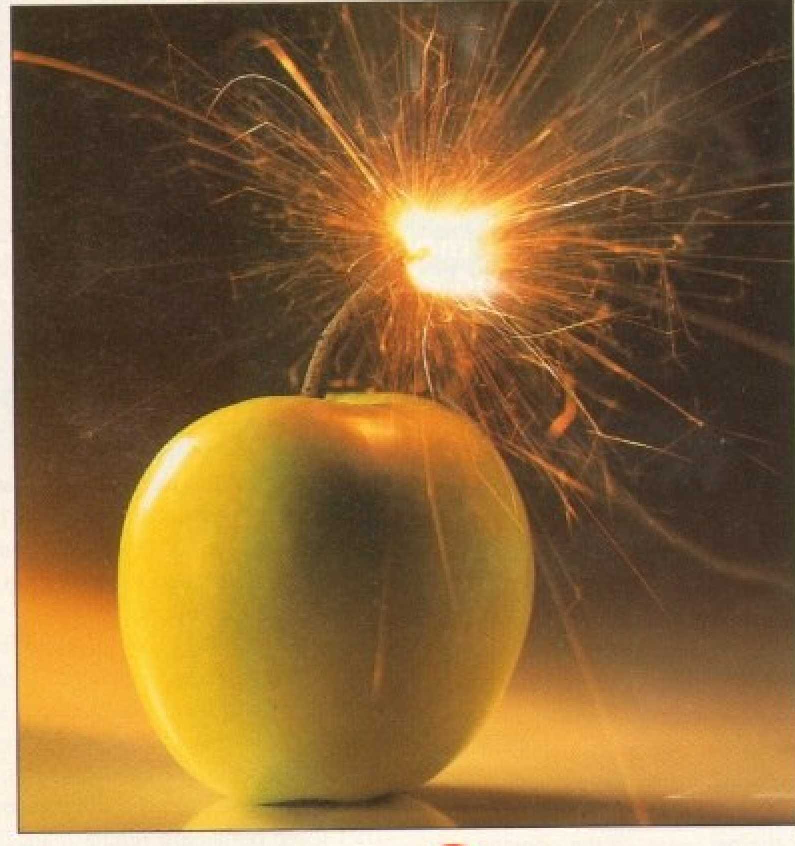
Run by a company called Connections, there will be tuition in creating captions, logos and rolling and crawling credits on the A500 and A2000.

Attendees will also be shown the possibilities of creating images and how to animate them. All creations will be transferred to videotape so that work can be taken home.

The fee is £90 for waged enthusiasts and £60 for the unwaged. More information from Connections on 081-741 1766.

SCALA

**Everybody's talking multimedia revolution.
Allow us to light the fuse.**



A lot of apples were bruised when we first introduced Scala, the professional presentation package. With the new Scala MultiMedia MM200, they will be blown into oblivion!

Let us introduce a few of the features that make Scala MM200 combined with the Amiga the world's most powerful multimedia environment:

Scala EX
A revolutionary new plug & play system, for the integration of laserdisk, still video, MIDI, or CDTV sound in your Scala presentation. Extra EX'es, such as 24 bit graphic support and VCR control are also available.

Scala Wipes
More than 80 amazing, smooth and professional transitions provide possibilities previously unseen on the Amiga.

Scala Sound
Enhance your presentations with voice-over, music and special sound effects! Scala offers total control of recording and play-back.

Scala Shuffler
Instant viewing of your whole presentation! You can see up to 112 pages at one time. Simply shuffle them around with the mouse!

Scala Snapload
A series of advanced techniques make Scala load and display pictures and animations faster than any other package!



Scala Buttons
Creating interactive hotspots has never been so easy! Scala MM200 even includes full support of variables.

Scala LINGUA
The multimedia language Lingua with its close link to ARexx puts the advanced user in total control!

AnimLab
With this bonus program you can make your animations play up to four times faster!

The press writes:
"The word multimedia has been battered and misused... Scala on the other hand, know exactly what multimedia is and what to do with it!" *Amiga User International (UK)*

"...the best program in show business." *Amiga Format (UK)*

"Scala MM200 is the kind of software that many serious users simply can't afford to be without." *Amiga Computing (UK)*

Scala MM200
— for video titling, training, business presentations, interactive use — or any multimedia combination.



For a close look at the market leader in multimedia software, contact your dealer today!

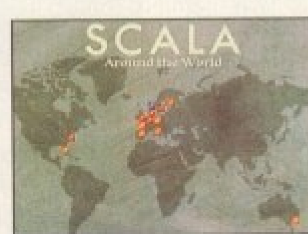


The Scala main menu.

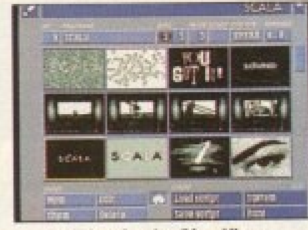
Scroll text by Scala.



The Scala edit menu.



It's a Scala world!



The Scala Shuffler.

The SCALA group:
Oslo, Copenhagen, London, Amsterdam, Stockholm, Washington DC.

SCALA
Why make it harder?

SCALA MM200

£50 OFF

the RRP of £399 inc. VAT when you purchase a copy of SCALA MM200 only at the following TECNO outlets...

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Holborn, 3 Proctor St.	071 831 9398
Belfast, 7 Arthur Sq.	0232 438844
Birmingham, 1 Suffolk St.	021 632 5753
Bristol, Rupert St.	0272 214421
Bromley, 239 The Glades	081 313 1898
Cambridge, 71 Bridge St.	0223 467766
Cardiff, 31/32 High St.	0222 237343
Guildford, 141 High St.	0483 302011
Hanley, 2a Fountain Sq.	0782 204444
Ipswich, 11 Upper Brooke St.	0473 236161
Leeds, 34 The Headrow	0532 425010
Leicester, 15 Market St.	0533 547007
Manchester, St. Peter's Sq.	061 228 0461
Northampton, 16b Peacock Abington St.	0604 36776
Oxford, 16 High St.	0865 244663
Peterborough, 3 Queensgate	0733 555411
Reading, 56 Station Hill	0734 591005
Sheffield, 10 Prinstone St.	0742 737311
Southampton, 89 Commercial Rd.	0703 229227
Watford, 53 The Parade	0923 242225
TECNO MAIL ORDER	081 898 9934

Offer ends 30th April, 1993



Denny Atkin reports on the latest developments from the USA

ADPro Enhanced!

ASDG is shipping a significant upgrade to their Art Department Professional package. Although the program has supported AGA since long before Amigas with the new chip-set were available, ADPro 2.2 adds support for the AmigaDOS 3.0 monitor types list, so you can now render pictures in modes like Super72 Super hi-res-Interlaced.

A new Temp saver lets you save your image to a temporary buffer before trying a destructive operation. You can also use this to quickly access the same image over and over again to perform different operations on it.

ADPro 2.2 adds an Anim loader and saver, making animation creation and processing a snap. The program is also the first to support the new Anim Opcode 8 (Anim-8 – geddit?) format created by ASDG.

Opcode-8 anims take advantage of the 32-bit chip RAM in the Amiga 1200, 3000 and 4000, giving you much faster animation capabilities on those machines.

When run on an AGA Amiga, the visual operator screens now appear in 256-shade greyscale instead of just 16. Some new operators and dithering algorithms are available, as well as support for a number of new third-party graphics boards.

ARexx support in the Fred utility has been markedly improved, and you can now use list view requesters in your macros, so you're not stuck trying to remember that dither number 1 is Floyd-Steinberg.

About 50 sample ARexx macros are included for processing your images, so you may never need to write your own. Perhaps neatest of all is the new ADPro File Sentry utility, which will watch directories (even on a network!) for new files and let you perform operations on those files.

Imagine a network of 12 Amigas all rendering in Real-3D and a thirteenth machine gathering the resulting images, processing them, and creating an animation!

These features are just a sample of the improvements in the new version. ASDG has provided three free upgrades to ADPro 2 over the past year, so the upgrade fee for this version seems quite reasonable – $45 outside the US. Like earlier versions, ADPro 2.2 retails for $299. Contact ASDG, 925 Stewart St., Madison, WI 53713 USA; (608) 273-6585.

Denny who?

A little plug for the piece of work that has kept me very busy for the past year or so and has resulted in *Amiga Computing* screaming "we need your column last week!" more than once.

Denny Atkin's Best Amiga Tips and Secrets from Compute Books, is a collection of the Amiga tips and tricks I've collected since 1985 while working at an Amiga dealer, serving as president of one of the first Amiga users groups, and editing one of the US's three remaining Amiga magazines. This 275-page tome contains chapters with tips for AmigaDOS 1.3, 2.04, 2.1, and 3.0, as well as the various versions of Workbench.

Other topics include expanding your Amiga, using hard drives, speeding up your machine, emulating other computers, and getting the most out of your printer.

All Amiga models are covered, including CDTV, the A1200, and the A4000. I've been helping people take advantage of their Amigas for over seven years now, and this book contains a combination of answers to the most-often-asked questions and the most useful tips I've encountered.

It's geared towards Amiga users, not programmers, and is designed to keep you from pulling your hair out when you encounter a frustrating problem or expansion question.

The book sells for £18.45 and is available in the UK from Computer Manuals, 50 James Rd., Birmingham B11 2BA. Phone 021-706 6000, or fax 021-706 3301.

Next month I'll have a report from the Amiga Developers' Conference in the land of Disney – Orlando, Florida. This is the first world developers conference, and with attendees from Europe, North America, and elsewhere, it promises to bring lots of interesting information to light.

Much of it will be top secret, of course, but I'll do my best to get the scoop on interesting developments from Commodore and its developers.

Disk paramedic

Moonlighter Software Development was the first company to successfully tackle Quarterback, with the their excellent Ami-Back hard disk backup program.

Now the company has it's sights lined up on Quarterback Tools, and the player they've signed up is the not-too-subtly-named Ami-Back Tools.

If you've ever hard a floppy disk go belly-up, you know it is a gut-wrenching experience. But if you suddenly lose access to your entire hard drive, it's hard not to succumb to the temptation to leap from the nearest tenth-story window. Don't jump! Ami-Back Tools will not only perform emergency surgery, but give your disks regular check-ups and immunisations as well.

Ami-Back Tools is a single program, but it's organised into a group of modules. GP (General Practitioner) is a disk-optimisation program.

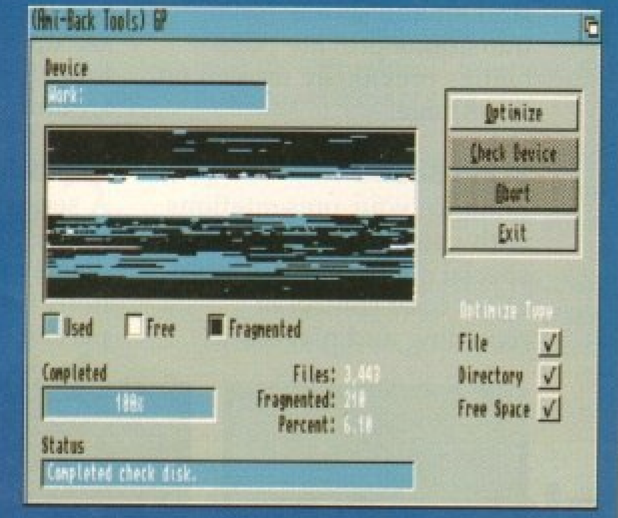
Much faster at its task than Quarterback Tools 1.5, GP will let you optimise files, directories, or free space, or any combination of the three, depending on how much time you want to spend.

If you just want to speed up the DIR command or file requesters, optimise the directory listing. Optimising free space keeps new files from becoming fragmented. Optimising files stores them in continuous chunks, which makes files load faster, especially from floppies.

Disk Analyst fixes disk structure problems, such as checksum errors or those weird "Key not set" errors that can make your disks read-only.

Reviver recovers files accidentally deleted or lost through a quick format, while 911-Recovery will back up selected files even from a disk that so hosed that AmigaDOS will not recognise it.

Lab Test lets you create a database of file checksums which can be used later to check for corrupted or virus-infected files. Finally, Antiseptic wipes old information from free spots on your disks, preventing others from recovering sensitive data that you've erased. You can schedule many of these tasks to take place automatically at set periods using the included Ami-Sched II utility.



Although Ami-Back Tools works fine under Workbench 1.3, it also supports the new features of AmigaDOS 2 and 3, such as hardlinks and the Directory Caching file system.

The program retails for $79.95, which is a small price to pay to know that you won't lose your valuable data. Registered Ami-Back owners can purchase it for $39.95.

For more information, write Moonlighter Software Development, 3208-C E. Colonial Dr., Suite 204, Orlando, FL 32803 USA; call (407) 384-9484; or fax (407) 384-939.



WICKED TOYS FOR WICKED BOYS

Our A1200's are also available with fully prepared and formatted internal IDE hard disk drives. Please add the following prices for the size of the disk drive that you require:-

20MB	£110
40MB	£179
120MB	£279
240MB	£449
330MB	£579
480MB	£879

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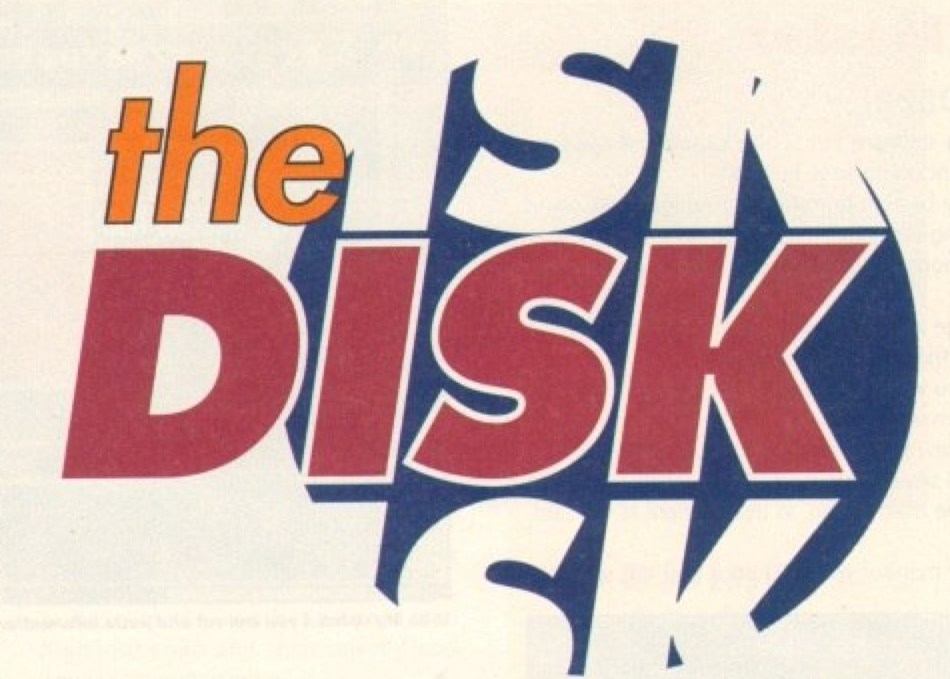
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stereo MASTER
Superb stereo sound sampling software
COMPLETE PROGRAM!
Brilliant educational program from the range
AMIGA
3
PLUS Wordsearch – an intellectual brain-teaser
Fast intromaker – easy to use boot-up utility

MaxiPlan4

Powerful enough for the most demanding user, yet friendly enough for the beginner, the Disc Company's Maxiplan4 is the ideal spreadsheet

MaxiPlan4 has to be one of the best all-round spreadsheets available for the Amiga, as it offers many special features but still manages to be user friendly enough for the novice computer user.

A spreadsheet is a program designed to help you make financial calculations and charts with ease. Not only will it work out complicated financial calculations but also manage and manipulate all sorts of data.

To use Maxiplan4, simply reset your Amiga and insert the CoverDisk containing Maxiplan4, then double click on the disk's icon followed by the Maxiplan drawer, finally double clicking on the Maxiplan icon, which will start Maxiplan off and running.

Worksheet

Once you have Maxiplan working you will be presented with a box asking you if you wish to load an existing worksheet. Just click in the left-hand corner of this box to cancel it.

You will now have a blank screen. Press and hold down the right mouse button to reveal the pull-down menus, go to the new worksheet and let go of the mouse button.

You are now ready to start a new worksheet. On the screen you will have various menus at the top and a large area below them which is made up of horizontal rows, marked by letters, and vertical rows, marked by numbers.

This area is where you set out the information you wish to calculate and manipulate. Moving around the worksheet area can be done with the mouse or by using the arrow keys. To put information on the worksheet you must move the cursor over the box you wish to put information in then click in the empty space next to the word "contents" just above you alphabetical rows.

So, with Maxiplan up and running with a fresh blank worksheet, it's time to input some data. This may sound complicated but as I have already explained it's quite simple. To start with we'll just do a simple spreadsheet showing the total cost of shopping trip.

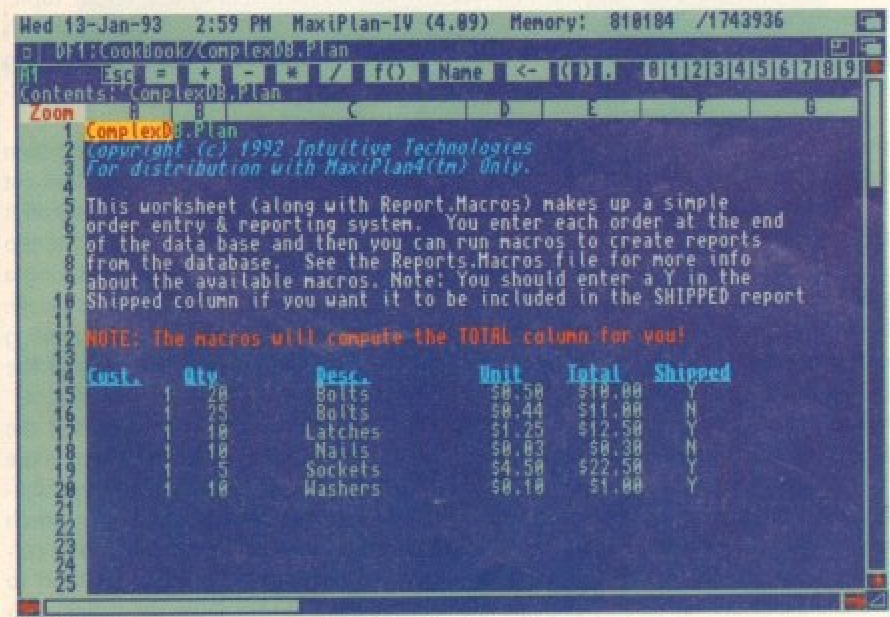
To start click on the box "A1". Now click next to the contents bar above. You can now type in text or numbers, but we will type "Articles Bought" (followed by Return). You will notice how the text you have type has appeared in box A1, although the text is too long for the box's width. To fix this, pull down the overhead menu, go to the format column and select "Width" and "Specify". You will now be asked how wide you want the column, so type 15 and then hit Return.

Now that you have called column A "Articles Bought", move the highlight bar down to A3, click in the "contents" row , and then type "Bread" followed by Return. You have now added the word bread to column A3 and the highlight bar has moved down one space automatically.

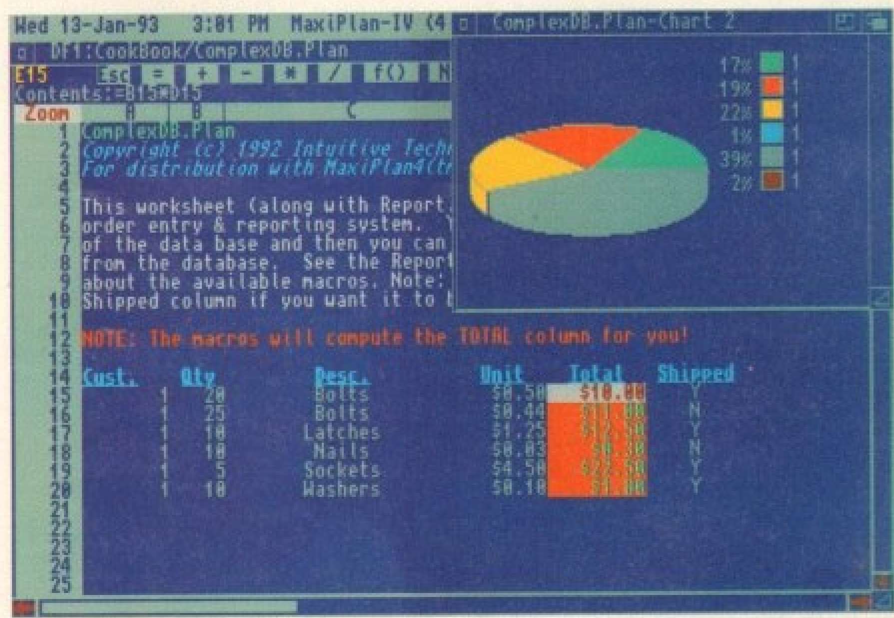
Add the following articles one after the other, remembering to press Return after each item, Tea, Milk, Sugar, Coffee and Butter.

If you have completed this task correctly you will have a column called "Articles Bought" with a descending list of food items. Now you have to make a column to hold the items' costs.

To do this, move the highlight bar to the C1 column, click in the contents bar, type "Cost" and then hit the Return key until the highlight bar is at the same level ➤



Maxiplan's layout makes even complicated worksheets easy to understand



Defining charts takes just few simple clicks with your mouse

Stereo Master

Microdeal

Stereo Master is not only stereo sampling software but is also capable of real-time audio effects, and has a fully featured sequencing package built in.

Once you have this software you'll really be able to make your Amiga make sweet music. If you already own a sound sampling cartridge it will quite happily work with Stereo Master but obviously if it only a mono model then you will only get mono samples.

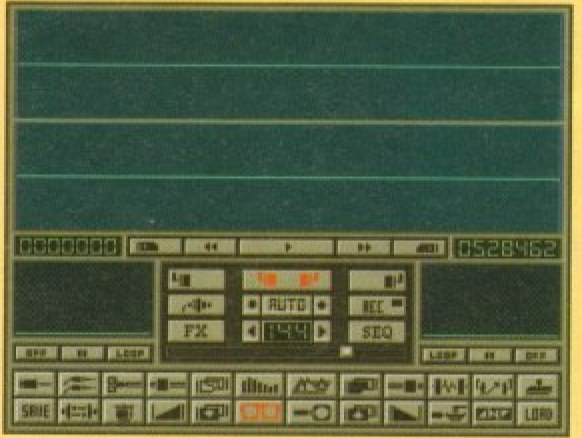
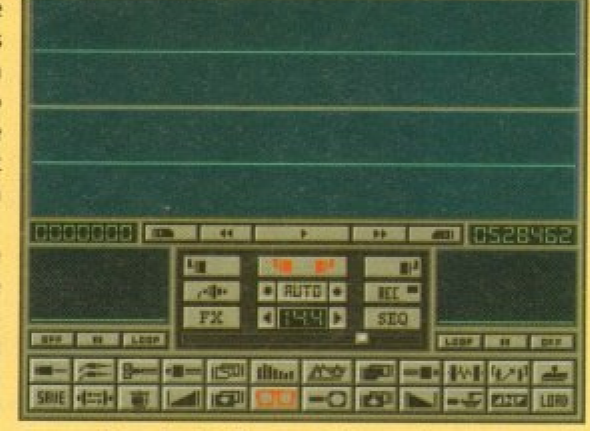
Don't worry if you haven't got a cartridge as we have a special offer overleaf which enables you to purchase Stereo Master's cartridge at a very special rate.

When loaded, Stereo Master presents you with a well laid-out screen which is easy to understand. This makes using the program very easy.

Included on the CoverDisk there are a few sound samples for you to try out and experiment with. Stereo Master has several screens, all of which deal with a different part of the program, so we will start with the main screen, as this is where all the sampling and sample editing is done.

Once you have the main screen on your monitor you will notice that it is split into two main sections. The two large rectangles in the top half of the screen is where the sounds which you sample or load into memory are displayed, the top one being the left channel and the bottom being the right.

The bottom half of the screen is taken up with the editing buttons and oscilloscopes. The oscilloscopes are very important as these display how high your incoming sounds are.

Stereo Master gives you total control over your samples

If your incoming volume is too high then the sample you record will sound distorted, and if the volume is too low you will hear background noise.

It's best to set the volume so the peaks of the sounds just keep inside the display – if they go outside too often then the sound is set too high.

To see the oscilloscopes in action, press the button just above the FX – this enables you to hear the incoming sound without having to sample it first.

In the bottom half of the screen there is a box in the centre. This displays the frequency you are going to record at. It automatically loads up set to 14.4KHz, but the higher this number the better your samples will sound – at the expense of memory, so it's best to experiment with this feature to see which setting is best for your setup.

Once you have the frequency set you simply press the Rec button to record sounds and then click the mouse button to stop.

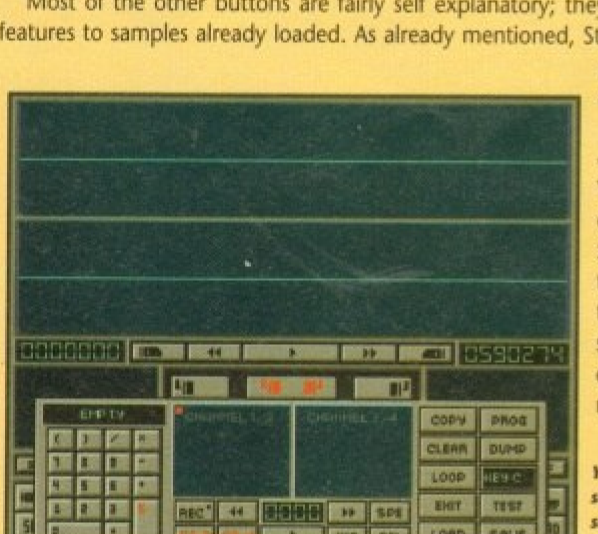
After you have recorded some sounds the two boxes at the top of the screen will display them in graphical form. To hear what you have sampled, just press the Play button, which is in the centre of the screen just below the sample rectangles.

If you have recorded a large sample and you only wish to hear a certain section then you can use the mouse to drag the blue bar which is positioned at the beginning of the sample to the point where you wish to start hearing the sample from.

There is also a blue bar at the end of the sample which can be moved to select then end of the sample.

Most of the other buttons are fairly self explanatory; they perform various editing features to samples already loaded. As already mentioned, Stereo Master is capable of performing real time audio effects.

To use this feature, click on the FX button. You will then see the effects editing screen. Select the effect you wish to use and then click on the Play button and input some sound – to stop the effect, just click the left mouse button.



You can not only sample sounds but sequence then in songs as well

With Maxiplan 4 you can cut and paste information between several worksheets at once

as your first food item. Now type in "0.45" followed by Return. The 0.45 should be on the same level as the bread. Now add the following prices: "1.50" for tea, "0.45" for milk, "0.80" for sugar, "1.50" for Coffee and finally "1.20" for butter.

Now you not only have a column for your food items but a column to show each item's price. The next thing to do is make Maxiplan display the total cost of all the items.

To do this we must create a row called Total cost, which will display the total amount which is in column "C". To do this, move the highlight bar to column "A" about two or three lines below the last food item and insert "Total Cost" as the row's name.

Now that you have called this row Total Cost you must tell MaxiPlan what to calculate in this column. To do this, move the highlight bar to column "C" and level with the text Total Cost then click in the contents bar.

Calculations

Press the = key on your keyboard and then using the mouse, click on each price in turn in column "C". Once you have clicked on all the prices you should see "=c3+c4+c5+c6+c7+c8" appear in the Contents column. If so, press Return and the total of all the items appear in the total cost column will appear.

You have now created your first spreadsheet. Obviously you can create much more complex spreadsheets but it's best to start at the bottom and work your way up.

Once you have set up a spreadsheet you can then display the information it holds in graph format. To do this, use the mouse to highlight all the individual prices of the food items then pull down the menu which contains the charts and select, say, the Bar chart.

A window should open up and draw a bar chart containing all the information which is in your spreadsheet. If all the info is not displayed, simply drag the corner of the chart box until it is large enough to hold all the info. As already mentioned, MaxiPlan has lots of advanced features like the ability to create charts and save them as IFF files for use in nearly all paint and wordprocessor packages.

It is also capable of importing and exporting Lotus 1-2-3 files to and from the PC. You can even set up a data base file using MaxiPlan4.

To help you take advantage of this brilliant package's special features we have put together a manual offer. To find out more, see the offer page overleaf.

Funschool Letters

Europress Software

Everyone with children will appreciate how difficult it is to get small children interested in learning the alphabet. Well, it's *AC* to the rescue! Over the next three months we will be giving away a Funschool module on every CoverDisk.

The Fun School range of software is aimed at teaching small children various topics such as maths and reading. Funschool's aim is to entertain children enough to keep them interested in the topic which they are learning.

Each Funschool package contains six modules, all teaching a different topic. The Letters module which is on this month's CoverDisk is aimed at teaching three to five-year-olds to recognise the letters in the alphabet.

To use it, load the CoverDisk and then either select Funschool from the short-cut menu or double click on its icon. When it has loaded you will see a box in the top left-hand side of the screen displaying a letter in a box and a row of letters below. The idea is to highlight the corresponding letter in the row on the bottom of the screen.

Once the computer has selected the letter for the child to find you simple use the right mouse button to move the highlight cursor along to the letter which matches the one in the top left-hand corner and press the left mouse button to make the selection. If the child's answer is correct then the bear on the right of the

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screen will strike the bell moving the marker up one notch on the bar.

When the child reaches the top, he or she will move on to the next part of the alphabet. This module teaches recognition of not only upper but also lower case letters.

As mentioned earlier, Funschool have an entire range of educational software available for children between the ages of three and15. Because of Funschool's fun approach to learning, it encourages children not only to learn more but also to concentrate harder.



Funshool's colourful graphics help keep children interested while learning

Indexer

Author: Michael and Lesley Cort

Indexer is essentially an extremely fast database program which has been produced by Pyramid Productions. The version on the CoverDisk has been specially programmed for *AC*, containing listings of articles and reviews which have appeared in *AC* over thelast year – although it's not as fast as the fully-blown version which you can get direct from Pyramid.

If you wish to find out if AC has reviewed a particular program or product then you can look it up and find out not only which issue it was in but also what page it was on as well. To load Indexer either double click on the Indexer icon or select it from the Short-cut menu. When you have loaded Indexer up, pull down the overhead menu and highlight Load and then select "load Amiga Computing index".

Once it has finished loading this index click on "Search DMI" then select one of the nine categories which are listed on the right-hand lower side of the screen.

You will now see a message in a box at the top of the screen asking you to select a category from the above menus for display.

These instructions only explain how to load and display information using Indexer. However if you wish to find out more about the programs featured then read the docs which are included on the CoverDisk.

FastIntro Maker

Author: Michael Bialas

FastIntroMaker is a small utility designed to help you create boot intros for your demo disks. What it actually does is display a picture and scrolling text on-screen while playing some music. This is a demo, so not all the features work, but it will be enough to get you started.

All you need to make an intro sequence is an IFF picture and some text in a standard text file. The text file can be created using any wordprocessor or even shell's own editor, Ed.

Once you have these two, load FastIntroMaker and click on the Load Text button to load your text. Next load your picture. Once you have both of these loaded you can select what speed the text scrolls at.

To test how your intro will look, just press the test button. If your are then happy with it, select Save. To use the demo, simply put it in the root directory of you demo disk and call it up in the disk's startup-sequence. ie:

```
run >nil: <nil: sys:filename
```

filename being the name you gave you gave to your intro.

Faulty disk?

Subscribers: If you subscribe to Amiga Computing and your disk has been damaged in the post, please return it to: Amiga CoverDisk, Europress Direct, FREEPOST, Ellesmere Port, South Wirral L65 3EB

Non-Subscribers: If you bought magazine from a shop and found that the CoverDisk was damaged, please return it within two months to: ProSoft, 5 River Gardens Business Centre, Spur Road, Feltham, TW14 OSL. Tel 081 890 8290

Check 37

Author: Chris Brown

Over the last few months we have been using a small but very useful program called Check 37. This program checks which Kickstart your Amiga has fitted and then runs the appropriate startup-sequence for your machine.

This program was written and supplied by Chris Brown of Croydon and we would like to thank him for his submission.

Wordsearch

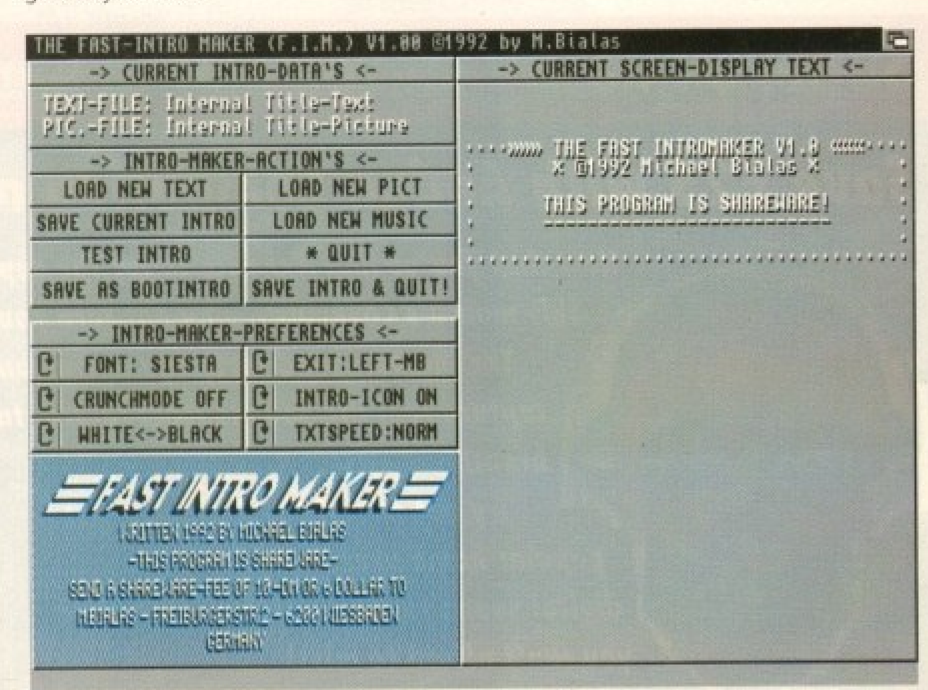
Author: Jack Pritchard

This is one of those programs which will be really enjoyed by people who love indulging in puzzle books. Wordsearch is a good old word search game which is designed to drive you completely crazy.

When loaded, Wordsearch selects at random the words it wants you to find in its maze of jumbled up letters. You then have to find as many of them as you can. When you find a word you will gain points, the idea being to either find all the words or acquire as many points as you can.

If you select a word and it is incorrect, this will result in a minus score, so be careful. When you think you have found one of the words in the list on the right of the screen, click on the word and then on the first letter in the maze which you think starts the word.

One of the good features of this game is the fact that the vocabulary it uses is stored in a standard text file on the CoverDisk, so if you load the Words file into any text editor like shells Ed then you can add extra words with ease.



Nice and easy layout makes it possible for novices to make disk intros

More muscle for Maxiplan

Now you have taken the plunge into the world of professional accounts and data management with MaxiPlan4 given away free on this month's CoverDisk, take advantage of our 135-page manual offer, yours for the amazing price of only



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To order your Maxiplan 4 manual, send a cheque/PO for £9.95 to:

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With the manual you will learn how to:

- Load and export Lotus 1-2-3 spreadsheet files directly
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- Create colourful charts (12 different charts available)
- Export charts in IFF format to for use in other Amiga programs
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Maxiplan's friendly manual contains a wealth of detailed information to make using the program's many excellent features quick and simple, and is the ideal companion for your free CoverDisk program. For only £9.95, you can't ask for a better bargain!

Superb quality stereo sound sampler cartridge for only £14.95!

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Now that you've had a chance to try the superb Mastersound software free on this month's CoverDisk, why not turn your Amiga into a digital sound factory?

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We've got some great deals for you

Fun School 3 – for the Under 5's



Now you've had a taster on the CoverDisk you can buy the complete package for only £13.95. In the rest of Fun School 3 kids can count, use verbs and colours, match shapes and learn to read in the gallery.

Fun School 4 – for the Under 5's



This continuation of the Fun School range lets children develop their creativity, reading and counting skills, and also involves them in naming parts of their house and singing along to nursery rhymes – and you can buy it for only £14.45.

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Look out for more Fun School offers in next month's *Amiga computing*

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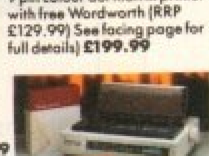


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AMIGA A600 THE WILD, THE WEIRD AND THE WICKED PACK



• Zapsac Carry Case
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Once again Commodore have put together a winning theme pack to complement the already popular Amiga A600. The Wild, the Weird and the Wicked Pack is an ideal starter pack containing a considered mix of software making the most of the Amiga's amazing capabilities.
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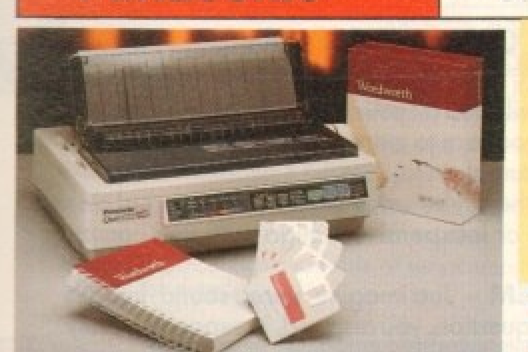
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Panasonic KX-P2180



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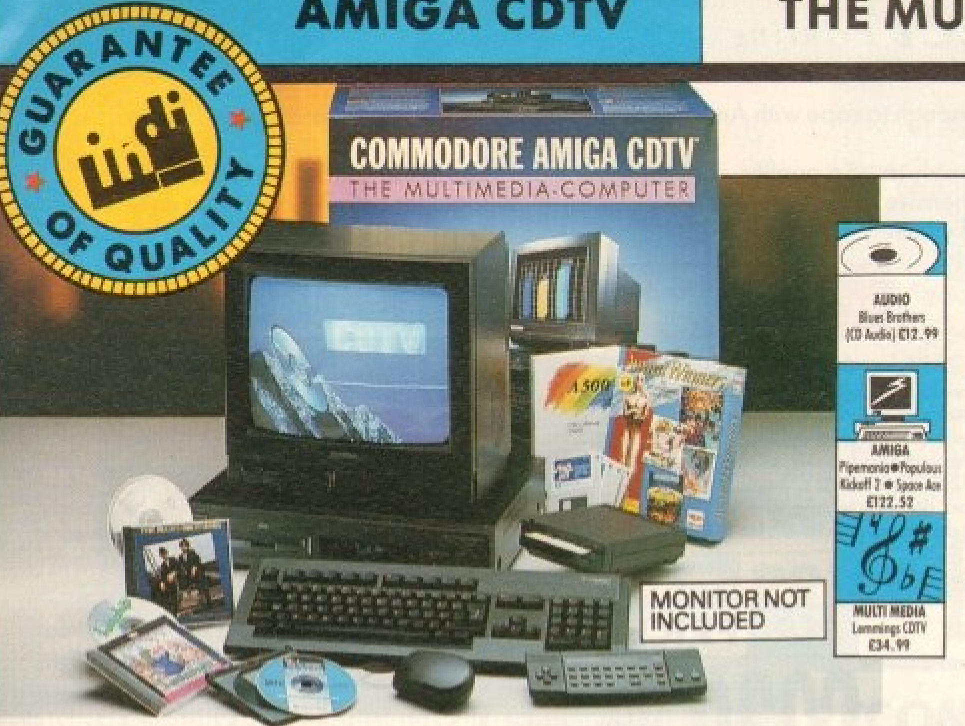
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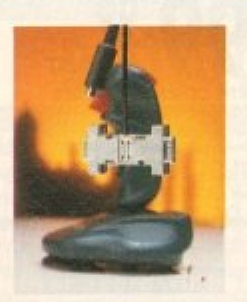
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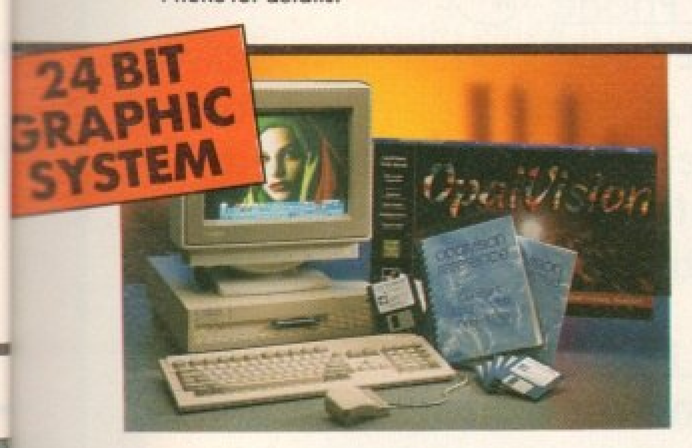
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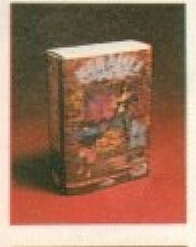
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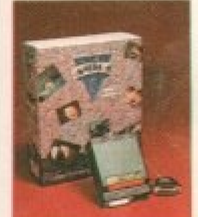
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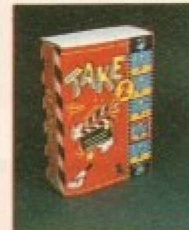
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Title fight!

Does the A1200 really knock the wind from the PC's sails, or is it just a weak pretender? Stevie Kennedy goes ringside...

Like some puny featherweight with knock knees and gloves three sizes too big, eyes puffed purple and bleeding from repeated batterings, the Amiga has been on the ropes for some time now.

Its opponent, the super heavyweight PC market, has landed punch after punch as price cuts, sound cards, excellent games, and more power for the pound have taken their toll on the helpless Amiga. Trapped in its own corner, the end must surely be nigh for the Commodore machine. At least that's what the doom merchants would tell you.

A more optimistic commentator might say the Amiga, in the middle of a recession, has taken everything the much larger, more competitive PC market can throw at it and come out fighting with a new range of machines and new hope for the future. It all depends on who you talk (or listen) to.

Some, with chips on their shoulder large enough for F15s to land on, take a perverse pleasure from dragging the Amiga through as many cesspits as they can find.

Others, in the great British tradition of mindless jingoism, wave flags and scream the Amiga's praises with about as much circumspection as a rutting bull in a field of cows.

Possibly the reason for this is that, while schoolboys in the early 80s, many of today's Amiga enthusiasts and journalists could be found at the lunch-time computer club arguing viciously over the relative merits of the Spectrum and the BBC micro.

The hangover of such "My Computer Is Better Than Your Computer" beginnings is hard to shake off if the pointed comments flying between the *AC* desks and those of our sister magazine, *ST User*, are anything to go by.

Whatever the reasons, it is clear that ➤

➤

precious little real debate has gone on concerning the pressures placed on the Amiga by cheaper and cheaper PC clones, which is why we decided to take the unusual and, I must say, normally pointless step of comparing two completely different machines.

Pointless because two machines based on different processors and radically dissimilar design concepts are about as comparable as chalk and cheese.

However, when normally sensible cheese eaters start to lick their lips at the sight of a blackboard, it's time to find out whether they've gone barking mad or if chalk really does taste better.

The Amiga is a computer originally designed in the early to mid-80s by a forward-thinking team of Californian hippies who had a wish list and a healthy visionary streak.

The result is that, at its launch, the Amiga was thoroughly modern in design and well ahead of its time. Commodore's subsequent lack of development threatened the Amiga's technological advantage for a while, but the AGA chip set and Kickstart 3.0 have recently brought the Amiga up to date again.

Business

By contrast, the IBM PC was designed in the mid-70s by a team of hard-nosed engineers looking to produce a desktop microcomputer for purely business purposes.

The result is that the original PCs had text-based mono graphics, no sound, and no frills. They were, however, very early converts to the hard drive and the better screen displays which have since become standard on the PC.

Driven by business demands, the PC world was slow to develop even basic graphics and sound, but when VGA started to become popular and Windows 3.0 for the true 32-bit machines first appeared, the normally boring PC world went mad for colourful screen displays, sound cards, huge hard drives, and high density floppies. Software improved, competition spiralled, and the PC bandwagon started to assume unstoppable proportions. Soon, colourful VGA-based games started to appear, and when the VGA card became a de facto standard, 256-colour games (eight times as colourful as most Amiga games) weren't long in coming.

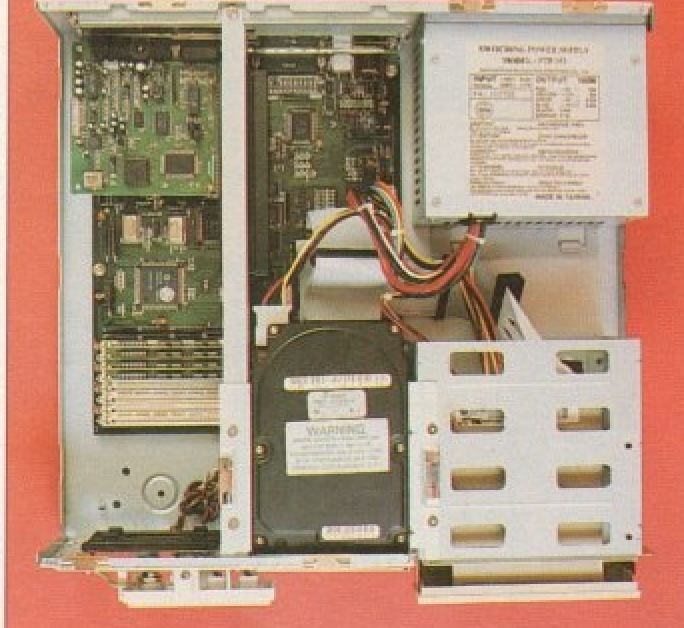
Games were just the start, however, and the more colourful, tuneful PC began to encroach upon the traditional Amiga strongholds – video and multimedia.

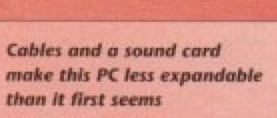
At this point, the price wars of 1991/2 began to force PC prices down to levels at which the better-heeled Amiga owner might reasonably expect to buy one for leisure or enthusiast uses and, since the middle of 1991, the letter pages of Amiga Computing have been the stage for a ding-dong battle between those who believe the Amiga is the superior machine and those who see the PC as a better value for money proposition.

Debates carried out through Ezra's postbag, such as the piracy argument simmering on and off over the years, are normally fairly sober affairs, but the furore over PCs has escalated into an internecine civil war with all the viciousness of a cat fight.

Sneering letters pouring contempt on IBM clones are matched in their vitriol only by those from readers apparently happy to see the management of Commodore UK dragged out and shot.

The most frequently voiced complaints – that the Amiga's graphics are obsolete and that it isn't fast enough – have been addressed by the A1200, but the way in which the Amiga is marketed still attracts a great deal of criticism. Serious Amiga users want hard drives as standard and much more support for high density floppies, high resolution multisyncs, and so on.




Cables and a sound card make this PC less expandable than it first seems

All of this is needed if the Amiga is to keep up with the competition in the non-games sector, and Commodore's seeming lethargy in this area (the A4000 isn't sold with a monitor as standard, the A1200 has no HD floppy) has prompted some to believe the company is happy simply to soak up sales from games players.

However, this view is a little one-sided. Commodore, at least in their public pronouncements, have recognised the importance of the thousands of Amiga enthusiast users who regularly use the machine productively, and it is for them that the A1200 was released.

From the comparison found in this article, it should be abundantly clear to most sensible Amiga owners that the A1200 represents the most convincing rebuttal to the PC clone, which one could have asked for.

It is more colourful, more modern, and in many ways faster than machines which cost the same in real terms and which, from simple spec sheet considerations, should be quicker.

If Commodore can only produce enough A1200s (with built-in hard drives please!) and the software houses can be convinced that it should be properly supported, the Amiga will come through the 1993 PC war with flag flying and all guns blazing.

The PC platform

The IBM PC's main limitation is its archaic design. Limited to 640k base memory and a clumsy paged extended memory system, the PC is forced to struggle against its own central design features to keep up with demanding modern software.

Of course, PCs can use much more memory than 640k, but the biggest single executable program can never exceed the available base memory, and all extra RAM (whether expanded or extended) is addressed by the system as 16k pages, making memory management a slow and painful business. Commercial packages


Software shopping

The cost of additional software is something which many users do not consider thoroughly before buying a machine, and it is in this category which the Amiga scores most highly over the PC. Software on the PC is undoubtedly much more expensive than on the Amiga, and in many areas it is of inferior quality.

For business use, the home user might opt for an integrated package, an area in which the PC is well served by such packages as Microsoft Works.

However, none of the PC options are significantly better than Gold Disk Office 2 and in terms of price there is little to choose between them.

Full-priced business software is another story. A complete wordprocessor for the PC might cost as much as £400, while the equivalent Amiga package will come in at £150.

Admittedly, Microsoft Word for Windows 2 has more features than Wordworth 2, more clip art, and more fonts, but the difference is hardly worth £250, and there is little, in terms of serious wordprocessing power, that the PC package can offer which Wordworth does not have an answer for.

Databases will always be a major forte of the PC, with only Superbase Pro 4 offering anything like the power of dBase, but the Amiga holds its own in terms of most other productivity software.

For graphics, especially the ray-traced variety, the Amiga is unmatched in terms of quality and price, and some of the video software around (more particularly in the USA) has an enormous lead over other that available for other machines.

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To move through the document, press PAGE UP and PAGE DOWN or click the arrows at the top and bottom of the scroll bar along the right side of the Write window.

Page 1

Windows 3 includes a basic WYSIWYG wordprocessor

costing as much as £60 will improve the situation, but these don't even perform the equivalent functions of the Amiga Gary or Gayle custom chips.

Secondly, the standard which established itself in the early 80s for compatibility purposes, the XT, was based on a slow Intel 8086 processor and was bereft of sound or colour graphics.

Since then a multitude of graphical and musical standards have evolved as manufacturers competed for the biggest slice of the market. The result is a confused mass of different processors, sound, and graphics cards.

SVGA (Super Video Graphics Array), offering 256 colours at a typical resolution of 800 by 600 when running Windows, has become a standard of sorts as the 1Mb Trident card sold in its millions, but every video card has its own drivers for Windows and not all are totally reliable.

Many of the cards on the market are very slow indeed, and make Windows use an exercise in patience.

In addition, neither mouse nor joystick were implemented on the XT, so there is no standard for either. Users must hope that the mouse supplied with their PC (assuming there is one) has driver software which doesn't interfere with too much other software and that the game card slotted into the machine (ditto) has a game or joystick port.

In use, the PC is a good machine for straightforward business productivity. The available software, though sometimes very expensive, is excellent, and the best of it has reached a level of professionalism matched by few Amiga packages.

On the down side, most Amiga users would shrink at the £400 cost for top-end wordprocessors.

For most other uses, such as music, video, multimedia, and graphics, the PC has less attraction. In some of the Amiga's strongest areas, it is weak (though improving), and in others no better than average.

For example, a ray tracing package – 3D Design Studio – recently released in its new version for the PC and offering no more capabilities than the £300 Imagine 2 – would cost the PC user almost £2,000.

Real 3D v2 will retail for less than £400 and should blow away any program currently in existence on any other desktop machine.

Where the Amiga has come under increasing threat from the PC is in a sector where two years ago no-one would have expected it – games.

The VGA card coupled to an AdLib or Roland-compatible sound card makes for a graphics and sound system comparable to the Amiga (better graphics, inferior sound), and games manufacturers weren't slow to exploit the potentially vast PC games market.

Games on modern VGA PCs are therefore more colourful than their Amiga counterparts, faster (when run on a 386 or better), and bigger due to the predominance of hard drives.

Think twice

Amiga owners not previously tempted by the PC have thus taken a look at the games available on the other side of the fence and started to think twice.

However, PC games are unlikely to progress in technical terms from this point. Games houses have taken the 1-4Mb SVGA machine with 40Mb hard drive as their base level games platform and will not assume a higher level of equipment for at least another year or two.

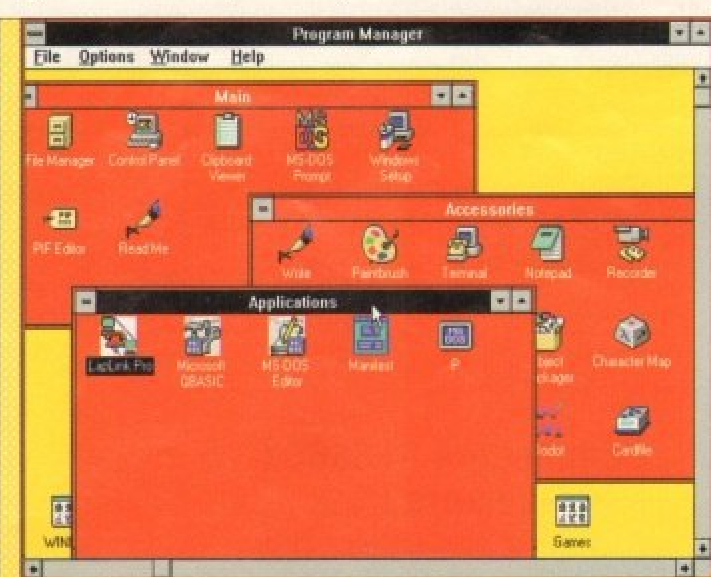
The Amiga, however, has just leapt forward with the AGA chip set and should start to see superior games over the next year.

As a 2Mb machine with 256 colours in higher resolution than the PC, and fast graphics chips for large sprites and smooth animation, the A1200 should gradually begin to overtake the PC in terms of games quality, though there won't be many games of this kind in the near future.

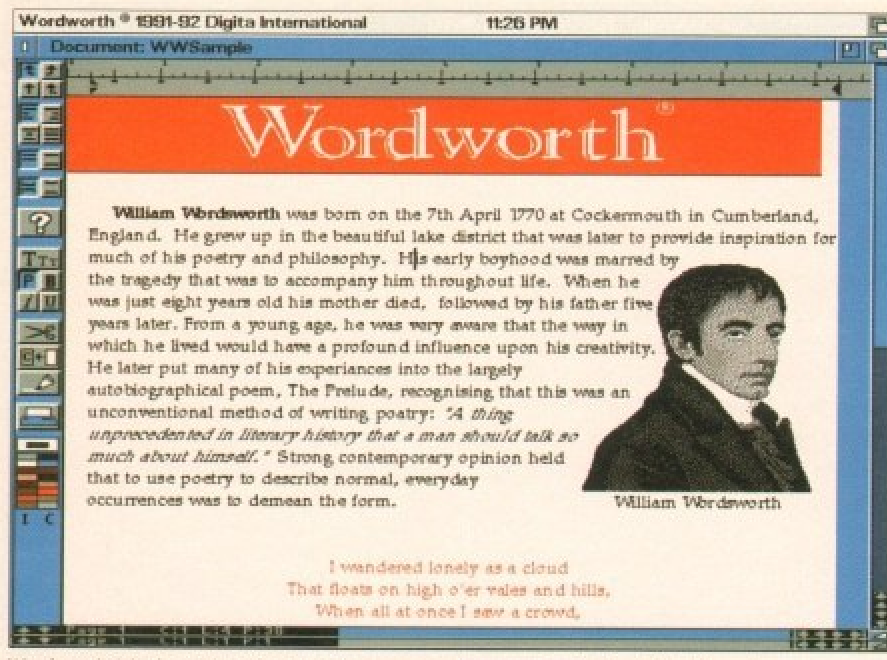
The Amiga platform

The Commodore Amiga is a multi-processor machine based around the principle that many hands make light work. In its most modern configuration, the machine contains a 68020 (or -040) 32-bit chip aided by an array of custom chips, 2Mb RAM, and a single floppy drive.

Custom co-processors include Alice and



Though colourful, Windows is sluggish and less flexible than Workbench



Wordworth 2 is the Amiga's best wordprocessor and comes close to the better PC packages

Lisa, between them providing the superb AGA graphics capabilities, the ageing Paula sound chip, and a variety of other chips taking care of everything from the serial port to RAM.

What this means is that, in effect, an Amiga CPU is more at liberty than any almost other machine's CPU to concentrate on true processing.

Jobs which can be carried out by the custom chips are whizzed off to be completed while the CPU gets on with something else, and as Kickstart (the Amiga's built-in operating system) has at its heart a modular approach to system resources, the Amiga is the only home or desktop micro to properly multitask.

For games players, this means little, but for those involved in productivity tasks, in particular video and multimedia, the ability to do two or more things at once is vital.

Such ease of use, switching from one program to another while both are actively running, is unique to the Amiga, and something which all owners miss if they move to another format.

Windows 3.0 offers the PC owner a crude task-swapping facility, but this is less than perfect as it freezes any task not being used rather than keepin it running as the Amiga does.

> *'Even simple multitasking is beyond the PC...'*

Even simple tasks, which are second nature to the Amiga such as formatting a floppy while printing a letter, are beyond the PC.

A second benefit of the Amiga's custom chips is speed. Believe it or not, an A1200 running a 256-colour Workbench screen is actually smoother than a 25MHz 486SX running the equivalent Windows screen, despite the fact that the A1200 uses a 68020 at half the clock speed.

The PC would benefit from a Windows graphics accelerator, of course, but these cost hundreds of pounds and are not standard equipment. Alice and Lisa do the same job and are found in every AGA Amiga.



The Amiga's Achilles' heel is its perception as a games machine. Though offset somewhat by the Amiga's video and multimedia talents, the games label has dogged serious Amiga development for years, resulting in a far smaller number of truly professional uses evolving for the machine.

Additionally, hard drives and VGA

Tech specs

For the purposes of a direct comparison we decided to go for a complete games system PC rather than the sort of dodgy box-shifter cut-down system to which the user would have to add mouse, joystick, sound card and speakers to at a later date.

The advantage of doing this is that the resulting PC has specifications more akin to the Amiga it is up against – stereo sound, gamecard, and so on. Our A1200 was augmented by the addition of an internal 40Mb IDE and a multisync monitor.

Commodore A1200

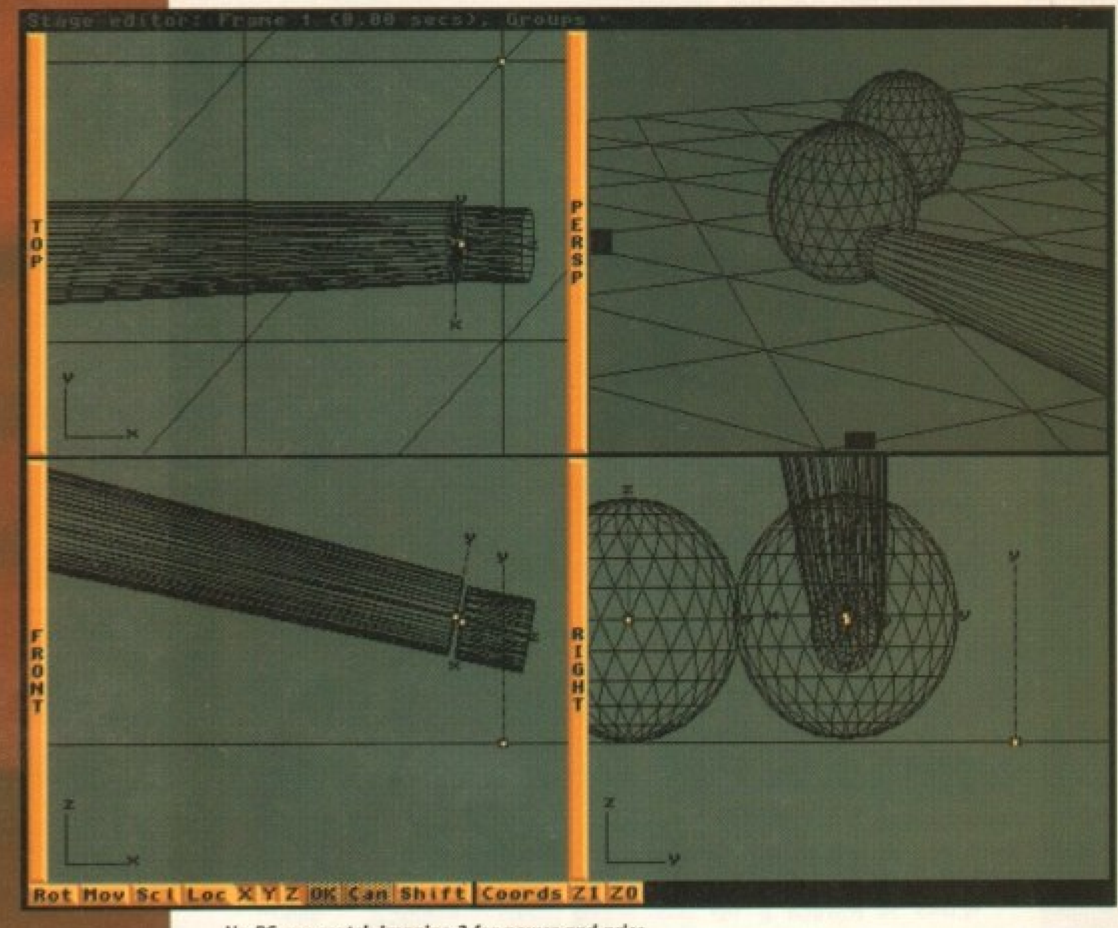
CPU: Motorola 68EC020 running at 14.3 MHz
RAM: 2Mb expandable to 32Mb
Ports: One parallel, one serial, mouse, joystick, audio, CVBS, RGB, R/F, floppy, PCMCIA
Video: Up to 1,280 x 512 or 800 x 600 in 256 colours from a palette of 16.7 million (24-bit). Ham8: 262,144 colours from 16.7 million in any resolution
Sound: Four-channel stereo over nine octaves
Expansion: 150-pin trapdoor slot for memory and CPU upgrades. PCMCIA slot for RAM upgrade. Internal IDE hard drive interface
Storage: One 3.5in FD 880k, one 40Mb HD (not standard)
Software: Workbench 3.0
Extras: Mouse, manuals, one year on-site warranty

Cost: A1200 – £399, 65Mb hard drive – £229, CBM 1960 multisync monitor – £399. Total: £1027
Supplier: Calculus
Phone: 0543 250273

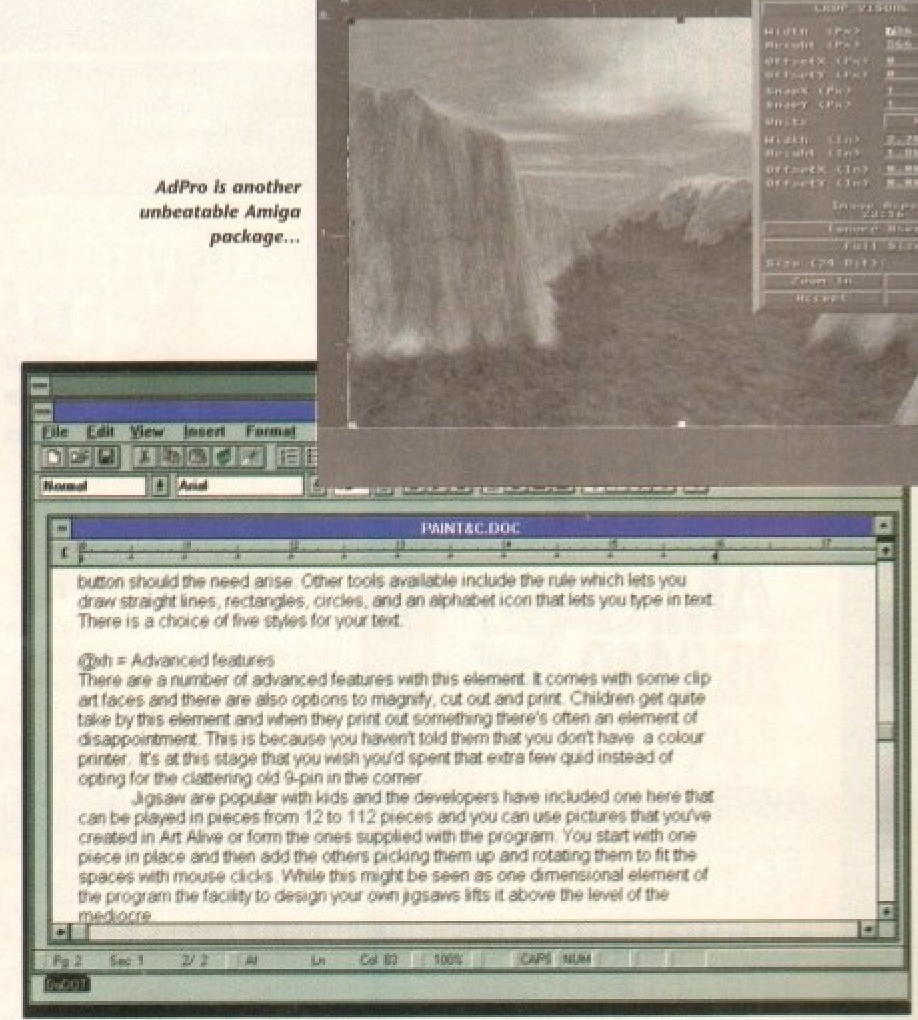
Commodore SL386SX-25 Leisure Pack

CPU: Intel 386SX running at 25MHz
RAM: 1Mb expandable to 16Mb on motherboard
Ports: One parallel, two serial, mouse, joystick, VGA, audio, speakers, microphone
Video: VGA 256k expandable to 512k. Max resolution with this video RAM is about 640 x 480 in 256 colours.
Sound: Sound Galaxy BXII – Adlib and Soundblaster compatible with separate mini-speakers
Expansion: Five full-length slots, though one is used by the sound card and one is apparently obscured by cable. Maths co-processor slot.
Storage: One 3.5in FD 1.44Mb, one 40Mb HD (factory installed and formatted)
Software: MSDOS v5.0. Leisure pack including Wing Commander II, Legend, D/Generation
Extras: Mouse, manuals, one year on-site warranty

COST: £833 including VAT and carriage.
Supplier: Commodore Direct
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monitors, though becoming much more common, are still not standard Amiga equipment. This means that hard drive installable games and more serious business software are slow to appear as the market is so much smaller. On a brighter note, the Amiga is better served than any other desktop machine in the graphics, video, and multimedia sectors, and has carved a solid niche for itself in all three areas.

Everything from TV graphics and movie special effects to video titling and glitzy presentations give the Amiga an enviable profile in the visual media world.

The PC is catching up in some ways, most notably with its lead in CD technology and the release of Windows multimedia extensions, but the Amiga's innate video talents and its suitability to the task mean it is unlikely ever to be pushed out of this particular market.

Commodore may not have marketed the Amiga as many users would have liked, but the sheer quality of the machine and its revolutionary nature have proved difficult to suppress.

Unlike the Atari ST, which, despite being cheaper than the Amiga, never managed to secure a solid base for itself, the Commodore machine looks capable of holding its own for the foreseeable future.

The 680x0 family of processors is more powerful than the Intel 80x86 range and an immensely powerful new chip – the 68060 – is due for release later this year.

On the custom chip front, Commodore have the AGA chip set available now and an even more advanced version in development. What this all adds up to is an optimistic future for the Amiga.



● Please note that the difference in total system cost reflects the fact that the A1200 has a larger hard drive and a much better monitor.

The PC package has a games bundle included in the price, but this isn't a fair criticism of the A1200 as such a new and sought-after machine is unlikely to be bundled for some time.

It would be possible to buy a cheaper multisync monitor and a 40Mb hard drive, but the former might cause problems with some of the Amiga's many display modes and hard drives of less than 65Mb capacity are rare

To be fair to the PC, a cheap 386DX-33 from a box-shifter might come in at around the same price as the SL386SX-25, but such cheap machines are usually supplied with no software, and the advertised price often excludes a mouse and MS-DOS.

Shopping around can provide bargains on both the Amiga and PC side, but the prices provided above are probably the best guide to the relative expense of the two systems.

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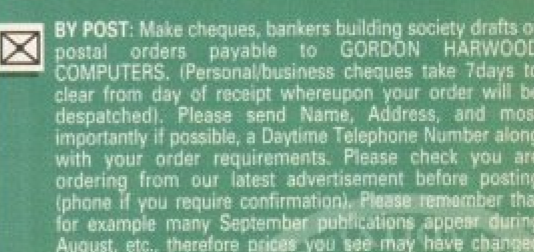
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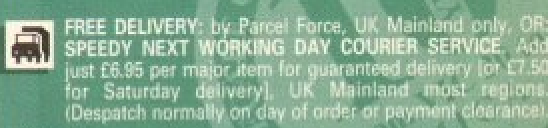
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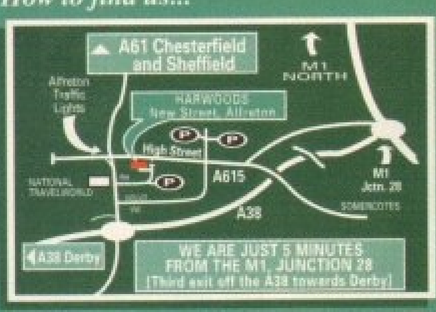
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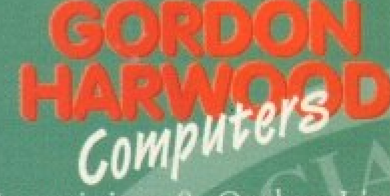
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Getting back to a more serious note, buying a monitor is fraught with problems. Monitors have a dictionary of jargon all to themselves – VGA, Analog TTL, composite, dot pitch, vertical and horizontal holds and so on.

These all determine the type of monitor and the quality of the display – numero uno in choosing a monitor.

The Amiga monitor market is far smaller than that for the PC, and as such there are fewer monitors, but even so, there is still a pretty wide selection to choose from.

When buying a monitor you will probably have several requirements. Working in collaboration with a wide variety of people I set up a series of comparisons and tests designed to identify the monitors which were best for use on the Amiga and of most use to you, the serious Amiga user.

People consulted ranged from end users, technical support staff for monitor suppliers and Amiga dealers, TV/monitor repair engineers, colour specialists and designers of monitor tubes.

These tests were applied to the most popular monitors in the Amiga market, the result being that here, for you eyes only and bought to you by Amiga Computing, is the most in-depth technical testing yet seen of the Amiga markets' favourite monitors.

Each monitor was tested and checked for comparison on the following criteria (in no particular order) – resolution, clarity, compatibility, sound, convergence, colour purity and focus.

Also monitored (sorry!) was screen curvature and radiation emission. These points were then compared to the price for an overall judgement.

Each of the above criteria has its own peculiarities. Price is pretty obvious, unless you happen to be called Donald Trump.

Unlike just plugging your TV into the Amiga, the resolution you wish to work in directly affects which monitor you can use.

Older Amigas had several low resolutions and a higher resolution, the higher being for the serious applications, the lower for games and so on.

The higher resolution, however, was crippled with a terrible flicker which rendered it almost unusable. To overcome this problem, you needed a flicker fixer.

Newer Amigas with their ECS or VGA resolutions in the case of the A1200 and A4000 don't have this irritating flicker, but like the flicker fixers, require special multisync monitors to work.

Normal single scan monitors can't handle these new modes, and most of the multisyncs are unable to handle the normal lower resolutions – as with most things in life, you can't have it both ways! Both types of monitors are reviewed here.

Clarity means how clear the picture displayed is. To explain, imagine looking at a picture. Now imagine holding a plate of glass in front of it. The better the clarity, the clearer this glass – the worse, the more frosty. In general, the poorer the quality of the monitor, the more frosty you can imagine this glass becoming.

Compatibility is only an issue if you use other computers, in



The 1084S never dies, it just fades away

What to look for when buying

When buying any monitor, no matter what price, or even heaven forbid its rating in this review, there are several considerations to be taken into account.

Firstly, decide what you want to use your monitor for. This may sound silly – you want a decent display of course, but what you use your Amiga for can make all the difference to the type of monitor you opt for.

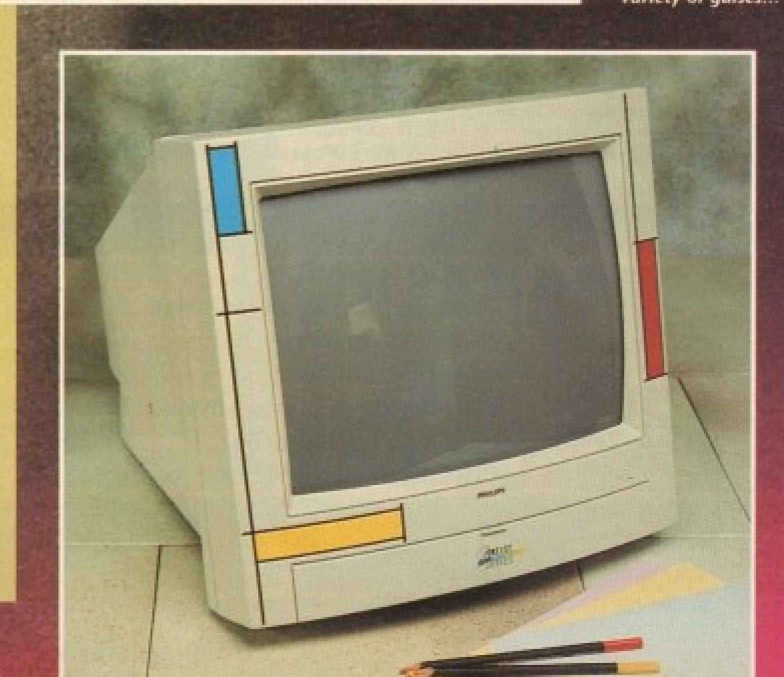
Trisync monitors will give far superior displays, but most can only display the higher flicker-fixed resolutions and are not suitable for games and the like.

If you want to play games or stick to the lower resolutions, opt for the Amiga standard monitors or maybe a TV/monitor which will give you a perfectly reasonable display for the intended task.

Next, if your Amiga is used in a home environment where it gets a pounding and is used by several different people, make sure you can change the settings and position easily.

Likewise, go for one with a tilt and swivel base – everybody who uses a monitor, like a car driver's seat, has their own peculiar positions and a tilt and swivel base can make life a lot easier!

Finally, consider connecting the Amiga. Do you get the cables with the monitor? If so, are they free? If not, where can you get them from and how much will they add to the price? Although not such a major problem these days, some older monitors or less popular models can be a real hassle when trying to connect them to the Amiga. Watch out...



CM8833's have been made available in a variety of guises...

which case you'll want as many different inputs as possible or know the requirements of your other computers – but more of this later.

Sound is, as already mentioned, really only worth pondering if you play games or use your Amiga to create sound with, in which case you'll want a monitor with stereo speakers rather than a single or no speaker at all.

Convergence defines (in easy terms) how sharp the images are. Convergence problems result in poorly defined edges.

Screen curvature is the amount of curve on a screen. The more curve the lesser the image, thus straight lines look bent. Cheaper and older monitors in particular suffer particularly from this, while the latest TVs and monitors use flatter, squarer tubes giving far superior pictures.

Each of the monitors was checked with several Amigas (an A500, A1200 and A3000) to check the various display modes possible.

VGA monitors and flicker fixers

Anyone who has looked at the A1200 will probably know about its new screen modes. But what do these modes mean for monitors?

Well essentially the new VGA resolutions give new resolutions and more colours. Whereas previous productivity modes offered increased resolutions, they were limited in the colours that they had available.

The new modes don't have this problem. Doing this however means that frequencies generated are much higher and thus need multisync monitors. To help users, Commodore made these new modes conform to the frequencies used by the PC industry standard monitors, ie VGA.

Whereas there are roughly three million-odd Amiga's scattered around the globe there are millions and millions of PCs, and thus a lot of VGA monitors to go with them.

The end result is that you should be able to pick up a VGA-compatible monitor for a fairly low price if you wish to use these new modes.

If you're using your Amiga for anything other than playing games, you've almost certainly come across the flicker. An annoying side-effect of Amiga graphics, it which means that whenever high resolution screens are used, the screen "vibrates" at a rapid rate, making it almost unusable, at least with non-ECS and Workbench systems before v2.0.

The ECS chipset provided a new screen mode called productivity mode, which gives a reasonably high resolution (640 x 480) yet doesn't flicker at all.

The only way to cure the problem on older models is to use a flicker fixer. There are two popular flicker fixers, the ICD Flicker Free Video Card for the Amiga 500 (available from most dealers) and MicroWay's Flicker Fixer for Amiga 1500 and 2000, A3000's have a built-in flicker fixer.

Commodore 1084S, £199

A good place to start is the tried and tested Commodore 1084S. Originally launched many, many years ago as the 1084, this is Commodore's standard Amiga monitor and without doubt their best display yet.

In reality a badged Philips model, otherwise known as the 8833 Mk 2, it is built by a company who know how to build monitors and it shows.

The display is reasonable, build quality is adequate and sound is good. The styling, being a Commodored monitor, is similar to the Amiga – although it's not to close to any particular model, it will look good next to all.

Easy connection is ensured through the inclusion of all the necessary leads and it has both composite phono sockets and 9-pin D-connectors.

Only a single scan model, it displays just the standard low resolutions and flicker modes, not the new ECS modes or flicker-fixed displays. But then it is only intended for the leisure market, not the serious market. All in all, it's a great monitor for the Amiga home user, if a fraction over-priced.

Philips CM8833 Mk 2, £293

BLUE CHIP AWARD

The Philips CM8833 Mk 2, like the 1084S and 1085S, is a single scan monitor aimed at the low-end games and home user. The CM8833 Mk 2 is the market leader, and not without good reason. Like every leader, it displays all the attributes of a product designed by engineers who know what users want now and in the future.

For various reasons during the course of this review I had three CM8833s lying around, and all had the same crisp display, bright colours and clear sound – surely testament to Philips reputation of being a manufacturer of quality monitors.

The styling, while not as good as an ear- ➤



'All the features you want, without a high price...'

...but plain vanilla is better than nothing

lier CM8833 derivative (the Artist, see insert) is smart and obviously a consideration at an early stage, rather than just being a after thought – as is often the case with monitors.

All the controls are available through a recessed panel at the front, which is, in turn, hidden by a flap down door when not needed.

Without doubt a key factor for any manufacturer wishing to stay ahead of the field is the attention it pays to its major markets.

While it would have been easy for Philips to take their standard model and sell it simply as an Amiga compatible, they have taken the trouble of including the cable required to enable easy connection of an Amiga to the D-connector on the back – a small but welcome point.

Further bending to Amiga users is a current promotion they are running. With each CM8833 Mk II is the game Lotus Turbo Challenge 2 from Gremlin, supplied free! Atari ST users have to send off for their copy!

Given the build quality of the monitor, the sound clarity and overall superior picture appearance I have no hesitation in recommending the Philips CM8833 Mk II and giving it the *Amiga Computing* Blue Chip Award for best single scan monitor.

Philips build monitors for Commodore and the CM8833 Mk 2 is the latest in a line of Amiga-compatible monitors, and certainly their best.

Commodore 1960, £562

The first multisync of this review is Commodore's own make. Surprisingly, the 1960 (given its Commodore origins) looks like it should be sat next to a dull PC compatible, which probably belies its real origins. I could find little reason to recommend this monitor over other manufacturers offerings. Its focus was way out and colours just weren't vibrant as on the Philips 7CM3209 or the Nec 4FG.

A problem with all multisyncs examined is that they don't have any speakers. This is a direct result of their ancestry in the PC and workstation markets. These systems don't have the sound output qualities of the Amiga, and as such, their monitors don't have speakers.

One advantage of the 1960 is that it, unlike the other multisyncs reviewed, can handle all Amiga screen modes – including the standard resolutions.

Given that it can display all Amiga modes, the 1960 gets a last minute reprieve for Amiga users, but if you don't want the lesser modes opt for something else. The picture quality just doesn't justify the price of the 1960!

NEC 4FG, £599

This is undoubtedly the best quality monitor of all those I looked at, it also has enough controls to keep even the most gadget-crazed propeller heads happy.

In addition to size and position buttons there are also options for degaussing and colour calibration. Colour calibration is a complex subject, and one which will become increasing important as the Amiga finds its way into more and more printing and graphics bureaux.

Essentially, colour calibrating is wysiwyg for colour. When scanning and printing colour images for serious printing (as in repro studios) the similarity between the colour of a graphic being scanned, what it looks like on-screen and its final printed output is critical (hence the term colour critical applications).

NEC's colour calibration takes care of this kind of problem, not quite as well as, say, Barco colour calibrated monitors, but then they cost roughly five to eight thousand pounds each!

The colour mode button triggers a feature NEC have termed AccuColour – a way of setting the three electron beams used to draw the pictures.

The picture quality was simply stunning, with superior convergence and equal, if not slightly better, purity to that of the Philips 7CM.

Also in the 4FG's favour is an Inver Shadow mask (ie the grill behind the screen through which the electron beam passes). On the 4FG the shadow mask has slightly larger holes, which allows greater amounts of the electron beams to get through thus giving a brighter display.

These facts and numerous other points (such as the flatter screen) make the display generated by the 4FG unequalled. However, and it's a big however, the 4FG has a price tag which, compared to the 7CM3209, makes me ask if its really worth it for Amiga use.

Don't get me wrong, the 4FG is undoubtedly the better monitor, but on an Amiga where you won't use half the features is it really worth almost £200 more? On a PC or Mac maybe, but on the Amiga I don't think so!

Philips 7CM3209, £258

From the outset this monitor impressed me. The Philips 7CM3209 is the first of the Philips Brilliance range and certainly lives up to the name.

The displayed pictures were almost on par to the Nec 4FG but as it's considerably cheaper, I feel it warrants being the top monitor of its class.!

Starting with the controls, which are located under the lip at the front. In addition to the typical brightness and contrast there are also another set for screen size and position (vertical and horizontal).

The only complaint with these controls is the use of icons to indicate what each does. While using icons may on paper be just as easy to understand, what's wrong with words? It may just my own preference, but I think it's worth pointing out!

Picture quality was great, with colour brightness being almost as good as the NEC 4FG (strange given the 4FG's better shadow mask), very good colour purity and reasonable convergence. Given its low price however it must rank as the best value multisync monitor and as such gets the award as the best!

Conclusion

At the end of the day buying any product falls down to what features you get, how relevant they are to you and how much you pay.

Given this combination of facts two monitors stand out, the Philips CM8833 Mk II and the Philips 7CM3209 in each class. The CM8833 Mk II provides wonderful, sharp images and a very good price.

The NEC 4FG comes in a very close second and fails not because of any failings on its part, but rather because it is priced as a high end monitor, and the Amiga doesn't need half of these features so you're wasting your money!

The winner of the multisync monitor therefore falls to yet another Philips model – the Philips 7CM3209. All the features you want without a high price! AC

The poison pill – radiation!

The thorny issue of monitors and radiation danger has become a hot subject for manufacturers. In the past there was considerable evidence suggesting that monitors were positively dangerous.

These days however, most monitors are well shielded against X-rays and there are soon to be laws to purposely limit radiation levels.

In the next six months, EC guidelines will come into force in various European countries preventing high radiation-emitting monitors from being sold.

The health-conscious people of Sweden and Germany already have similar laws, and the combinations of these elements means that many of the world's largest monitor manufacturers now produce low radiation models.

Most radiation is found around the rear of monitors, so it's advisable to avoid these areas.

But at the end of the day, there is little hard proof that monitors cause cancer. Neither has the link between monitors and miscarriages been proved – a US study failed to identify it.

However if you are worried, there are now an increasing number of low radiation monitors available, and your dealer should be able to recommend a suitable model.

Jargon buster

Aspect ratio – The difference between the horizontal and vertical dimensions of the screen. This should be 4:3 – the larger the difference between the two numbers the greater the distortion to screen images.

Bandwidth – A measurement (in MHz) which specifies the highest frequency the monitor can handle. Higher bandwidths mean higher resolutions.

Composite – A single signal from the computer that contains all information needed by the monitor – ie the colour, sync and audio signals.

Dot pitch – Behind the screen is a mask which is perforated with tiny holes. The CRT beam is fired at the this mask, and through these holes. The finer the holes the sharper the image. "Dot Pitch" is the distance be

Flicker – Screens are physically drawn (see interlaced) and flicker occurs because the eye can see the display being redrawn, unless it's done quick enough. Faster refresh rates, ie how often the screen is redrawn every second, reduces flicker.

Horizontal Scanning Frequency – This is the figure to determine how often the monitor redraws one horizontal line. The Horizontal scanning frequency is measured in kHz (kilohertz).

Pixel – An old abbreviation of "picture element". Each screen is made up of thousands of tiny dots (pixels) each of which Resolution – The number of pixels in the display area. The better the resolution (higher) the more pixels and thus the better the screen display.

RGB – Unlike Composite connections, the signal in RGB connections is split into its three colour components – Red, Green and Blue.

Scart – a Standard Connector for Audio Radio and Television is a universal connection standard for passing signals between two sources, in our case the Amiga and a monitor or TV.

Vertical Refresh Rate – The time it takes the electron beam to draw a screen. The faster the refresh rate, the less noticeable the flicker.

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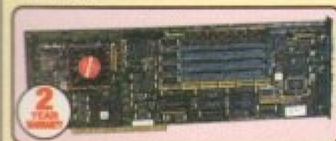
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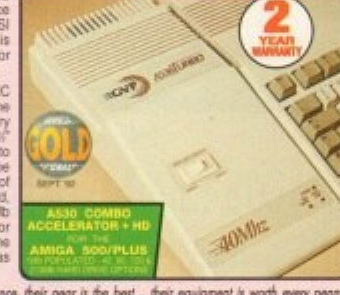
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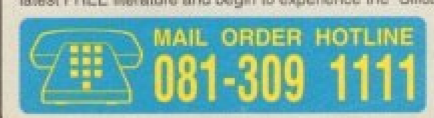
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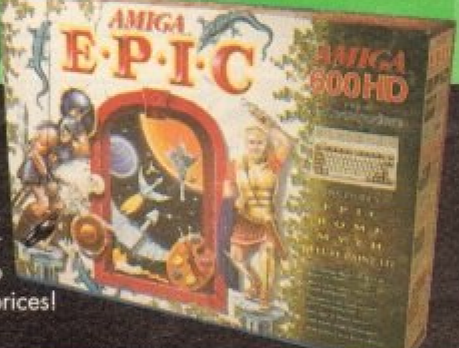
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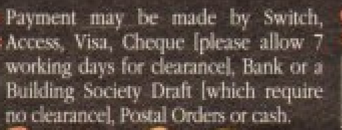


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That dumb machine

Do you want to turn your Amiga into an intelligent life form? Philip Gladwin introduces artificial intelligence for the Amiga

Artificial intelligence (AI) is one of the hottest research areas around, and this article is going to give you a taste of what's happening.

With SB Prolog available through the better public domain libraries you have, as far as I know, the only AI tool for the Amiga, and playing around with it is a great way of entering the arena. However, programming in Prolog can take a fair bit of brainwork, so before you lash out £15 on a Prolog text book, read on to find out what it's all about.

Hands up anyone who's seen Robocop. Remember the scene at the end where the other robot, the bad cop, does a lot of growling and chases hordes of people?

It's having a fine time wasting everything in its way until a flight of stairs introduces its first life crisis. The robot hesitates, extending a cautious foot, and topples over, falling straight to an ignominious end.

The designers had forgotten to tell it about stairs! This rather contrived plot device, which raised jeers right across the audience when I saw it, is, believe it or not, an excellent illustration of the problem at the very heart of artificial intelligence. Work on building these artificial intelligences has been going on for around 40 years, and the big realisation has been that we have had the wrong idea about what is really intelligent.

We've spent a lot of time getting machines to play chess, or predict upsets on the stock market, but the hardest targets are always going to be the little things, the things we humans find easiest. These are the things that continue to give so-called intelligent machines nervous breakdowns.

For example, no machine in the world could manage to sort and fold a pile of laundry fresh from the dryer. And even if it could, let the situation become one that the machine hasn't been specifically programmed for, like a sock being dropped behind the fridge, or an unexpected flight of stairs, and the only option for your Robo-Maid will be to lie down and take a couple of aspirins.

Real intelligence, as the bad robot found out, is the ability to adapt to the unexpected.

There are two main schools in AI at the moment – those people who think that neural networks hold the salvation of the human race (despite the fact that there are very few people around who can truthfully say they know exactly what's going on at the heart of a really massive neural net), and the old school, who have made considerable advances over the years, in machine translation, vision, expert systems, robotics and so on, using methods which are a little clearer to the average human. The differ-

(Knowledge Base Line: 1) **ancestor(A,D):-parent(A,D).**
(2) **ancestor(A,D):-parent(A,X),ancestor(X,D).**
(3) **parent(albert,ben).**
(4) **parent(ben,cath).**
(5) **parent(cath,denis).**
(6) **parent(denis,edwin).**

(the source code is the bit shown in bold. Don't enter the line numbers, and remember all the full stops).

SAMPLE DIALOGUE
(A) USER: |- parent(ben,cath).
PROLOG: yes

(B) USER: |- parent(denis,albert).
PROLOG: no

(C) USER: |- ancestor(albert,cath).
PROLOG: yes

Figure I: Ancestor knowledge base and sample dialogue

> *We have had the wrong idea about what is intelligent...*



Computer chess is an early example of the expert system in action

ence in the approach seems to come down to the opinion of what exactly constitutes intelligence. The Old School would, in their heart of hearts, be of the opinion that intelligence is something that can be analysed completely, that can be cast in rules comprehensible to anyone who cared to read them, and that can be duplicated wherever you care to write those rules.

They believe that, given enough brainpower and enough time we can have a definition, almost a set of equations, which will once and for all pin down what it is to be intelligent.

Replicas

On the other hand, those interested in building neural nets are generally those who believe that intelligence arises as a condition of having a brain like ours, contained in a physical body that is something like ours.

They probably will believe that intelligence is far too complex ever to be frozen in black and white, and will be aiming in some way to build artificial replicas of the conditions in which intelligence exists in ourselves, then sit back and watch the intelligence arise on its own.

There are lots of very successful programs which solve specific, well-defined problems, like recognising a previously seen component on a conveyor belt, or recognising when someone's spending on their credit card has become unusual, (and therefore there is a possibility that the card is being used by a thief), but as far as building an independent agent that could be let loose in the real world – well, at the moment, forget it.

Think about it for a moment. Given that we know an infinite number of things about the world, and given that a computer has an finite amount of memory, how do we write even a fraction of these pieces of information down so that a machine can use them?

Well one very successful way would be to give the machine a basic number of facts, and then give it the means to reason – to start with these central facts and deduce conclusions from them.

Precise

One way of doing this makes use of Logic. Logic gives us a language almost as powerful as English, but totally precise, and therefore usable by machines. It's based on the premise that you can represent objects as Terms – like x,y,z – and characteristics of objects as Predicates – like p(x), b(y,z), c(x,y,z...).

Given this, "green car" translated into logic could become **green(car)**. To represent more complicated ideas there are Connectives like AND, giving us things like **green(X) AND car(X)**.

Note the use of variables. Generally in logical descriptions like this you can think of X,Y or Z as "some sort of thing". So, "the hungry wolf is eating the peasant" becomes: **hungry(X) AND wolf(X) AND eating(X,Y) AND peasant(Y)**.

The other commonly used connectives are NOT, OR, and IF – which give us the

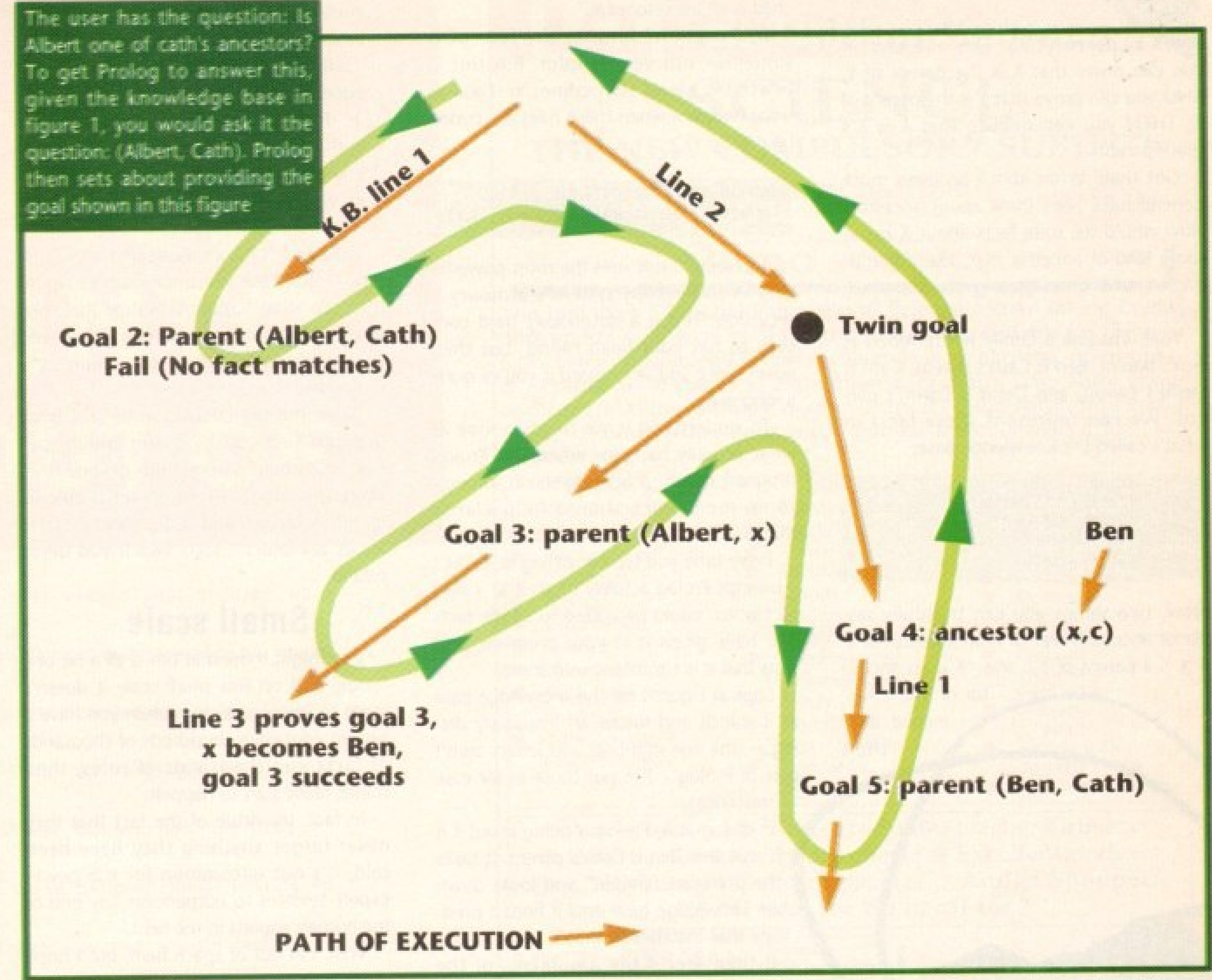


Figure II

ability to express even more complicated ideas, such as:

```
IF ((crossbow(X) AND jammed(X))
OR (name(Y,ethelred) AND frightened(Y) AND
shoot(Y) AND miss(Y)))
NOT (dead(Z) AND wolf(Z))
```

Let's, finally, get to Prolog. Invented in the 1970s, Prolog (PROgramming in LOGic) is a declarative language – which means that, in theory, all you need to do is write down all the things that you know to be true about the problem you want to solve.

When you want to find out something, (or more interestingly, when you want to deduce something), you just ask the system a question. Prolog is officially an Automated Theorem Prover.

This means that it deduces things by applying rules ("if you do this, then that will happen") to facts ("X is a Y", "two Bs make a C"). Like I said, that's the theory; it's not always so easy. To get into Prolog you need to learn how to represent Facts, and you have to learn how to write Rules about these facts. A fact is something like "Journalists are poor", or "I am a journalist".

In Prolog you would write these facts like this **poor(journalist)** and **is_a(me,journalist)**.

On the other hand, "If you're a journalist then you're poor" is a general statement, or Rule. When translated into Prolog it looks like **poor(X):- is_a(X,journalist)**. This is read something like "IF you can prove that X is a journalist, THEN you have proved that X is poor."

Similarly, we can code the statement "Bob is Ron's parent" as the fact **parent(bob,ron)**. Given a few Rules and Facts like this, we can manage simple deductions.

Think about family trees for a moment (I know that this isn't the most devastatingly interesting application, but this is the Prolog version of the "Hello World" program, so I'm afraid you'll have to grin and bear it).

For example, Bob is Ted's grandparent if Bob has a child, and that child is Ted's parent. If we put variables in instead of names (noting that variables always begin with an upper case character while constants always begin with a lower case character), then we can generalise and translate this piece of common sense into a machine readable rule: **grandparent(X,Z):- par-**



Even a simple route finder program can utilise AI routines

ent(X,Y),parent(Y,Z). This one says "If you can prove that X is the parent of Y, AND you can prove that Y is the parent of Z, THEN you can deduce that X is Z's grandparent".

Got that? What about an even more general rule? Let's think about ancestors How would we state facts about X being some kind of ancestor of Y, like a grandparent, or a great-great-great grandparent?

Well, imagine a family where Albert is Ben's parent, Ben is Cath's parent, Cath is Denis's parent, and Denis is Edwin's parent. We can represent these facts in what's called the Knowledge Base:

```
parent(albert,ben).
parent(ben,cath).
parent(cath,denis).
parent( )
```

Now, two things you can truthfully say about ancestors are: "X is an ancestor of Y if X is a parent of Y." and "X is an ancestor of Y if X has a child, and that child is an ancestor of Y."

Brilliant, eh? And on the face of it somehow not very helpful. But this is where the clever stuff comes in. Look at what happens when these rules are coded up.

```
ancestor(A,D):-parent(A,D).
ancestor(A,D):-parent(A,X),ancestor(X,D).
```

The second rule uses the most powerful tool in the Prolog system's armoury – recursion. This is a notoriously hard concept to get your head round, but then again, once you've grasped it you've gone a long way.

To understand it we need to look at what actually happens when this Prolog program is run. A little diversion through some mechanics should help clarify things.

Every time you type anything in at the I – prompt Prolog actually treats it as a new fact which could be added to all the facts you have given it in your program, and tests that it is consistent with them.

Look at Figure I for the knowledge base as it stands and follow an imaginary dialogue (the line numbers and letters aren't part of Prolog – I've put those in for ease of reference).

In dialogue A, Prolog is being asked if it is true that Ben is Cath's parent. It takes the predicate "parent" and looks down the knowledge base until it finds a predicate that matches (line 3).

It then sees if the arguments of the question are the same as the fact it has found. In this case the arguments don't match. It then goes on testing all the predicates in this way until it finds a match.

In this Knowledge Base the very next predicate (line 4) matches completely. It can therefore stop execution and report that, yes, it is true that Ben is Cath's parent. The query has "succeeded".

In dialogue B, Prolog is asked if Denis is Albert's parent. There is no predicate in the knowledge base to match this assertion, and so, the answer is "no" and the query has "failed".

Dialogue "C" uses recursion for the first time. Follow the execution path in Figure II to see what happens. Notice that, like most things in AI, you can represent Prolog trying to prove something as if Prolog was searching a tree.

Now, the big conclusion to take from Dialogue C is that by giving Prolog specific facts about parents, and general rules about ancestors, the computer is able to go off on its own and deduce specific facts about ancestors – facts which you never told it!

Small scale

You might think that this is all a bit of a fudge, and on this small scale it doesn't seem so impressive, but when you have a system containing hundreds of thousands of facts and thousands of rules, then things really start to happen.

In fact, by virtue of the fact that they never forget anything they have been told, it's not uncommon for the newer Expert Systems to outperform any one of the human experts in the field.

Well, I'm out of space here, but I hope you've had your appetite whetted. Programming in Prolog can be a mind warping experience to begin with, but after the initial traumas are over it seems to get very easy very quickly. It's certainly my favourite language, and if you want to get anywhere in artificial intelligence it's a must. So order a copy today and give it a go!



Using Prolog

As soon as you've got your hands on a copy of SB Prolog, the first step has to be to print yourself out a copy of the manual. It's written for people who already know Prolog, and it's a bit of a tough read, but you're not going to get anywhere without it. I used PPmore, and it came out beautifully formatted. One word of warning – it's over 100 pages long, so make sure you've got enough paper.

Once you have this manual you can use it to install the program. Make sure you pay attention to the path variables, so that the interpreter will know where to look for your source code files and its own library files. Once you have Prolog running you will be faced with a I – prompt (user friendly, eh?) and you can start running your fancy AI programs.

What do you mean you haven't any programs? Oh, use mine until you've written your own. Type it in using a text editor, such as Workbench's ED, or Qed from the WorkStation disk, and make sure you save it in the directory you specified earlier.

You load source files by asking Prolog to "consult" the file. There are two ways of doing this at the prompt – type either consult(filename), or use the short-cut and type [filename]. When it has finished looking at your code (a very lengthy process, so don't be too worried) you run your program by typing GO. When Prolog has finished it will echo either "yes" or "no", depending on the success of your query, and return you to the prompt.

And finally, a word of warning. You need at least 1Mb of memory to run SB Prolog. I have 3Mb, and experienced no memory problems, so I guess that somewhere in the middle is the optimum. And, how can I put this? SBProlog is not fast. In fact it's slow. Catastrophically slow. But never mind. Keep making cups of coffee and you'll be OK.

Jargon buster

BACKWARD CHAINING: A method of automating reasoning. Start from the solution and reason backwards until you have arrived at the question.

DEEP THOUGHT: Named, presumably, after the computer in *The Hitchhikers' Guide* which gave the number 42 a whole new significance, this is America's answer to Boris Spassky. Custom hardware, incredible software, supposedly the world's best chess computer.

EXPERT SYSTEM : An attempt to mimic the performance of a human expert in their field of expertise. Consists of an Inference Engine (code which reasons its way to a conclusion given all the information contained in the knowledge base) and a knowledge base, a kind of database storing all the facts the expert is assumed to know.

HEURISTICS : Rules of thumb, used to guide your AI system to a conclusion. Something like – if there is water on the window the weather outside is bad.

LISP : (LISt Processing) One of the earliest computer languages, still the choice for AI work in America. Europe seems to favour PROLOG.

MIT : Massachusetts Institute of Technology. Site of many a top AI project.

NEURAL NETS : Attempts to build AIs using models inspired by the way the human brain works. They have interconnected nodes which can be switched on and off, mimicking neurons, and are "taught" rather than programmed. Good at tasks involving pattern recognition.

NLP : Natural Language Processing. Making computers speak like you and me. English is a natural language.

MYCIN : The first successful expert system. Diagnosed illness. Asked questions about the patient's symptoms and searched its Knowledge Base for diseases with similar symptoms.

PREDICATE LOGIC : A method of using "mathematical" methods to represent knowledge precisely. A good grasp of logic is essential to get anywhere in AI.

SCRIPTS : Every situation in daily life has a script attached to it – a clichéd description of the things you would expect to happen to you and the objects you would expect to find in this situation.

THE FINAL WORD

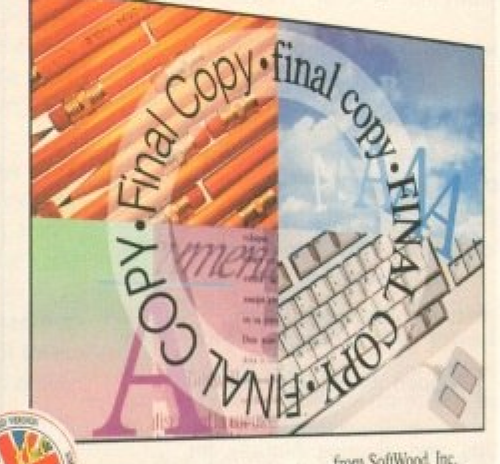
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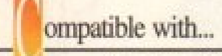
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AMS



The sound of silence

Paul Austin lends an ear to yet another Amiga sampler but this time it boosts full 16-bit stereo...

Ever since the release of the A4000 and A1200 there's been something of a dark cloud over the Amiga music scene as the much rumoured DSP – alias digital sound processor – failed to appear.

As a result, the dream of CD-quality sampling seemed as far away as ever for anybody on a tight budget. However Microdeal are set to add a silver lining to the aforesaid cloud via Clarity, a truly amazing sampling system which retails for just £149.95.

Thanks to the external connection of the sampler any Amiga can take advantage of the system, but it must be said that Clarity is only really at its best on accelerated machines such as the A1200, A3000, or standard 68000 machines fitted with 020's, 030's or 040's accelerators.

For owners of standard machines the compromise takes the form of a maximum playback of just two channels as opposed to the four of their accelerated counterparts.

A4000 cure

As the more observant may have spotted, there's no mention of the A4000 which as yet doesn't work with the Clarity software. Fortunately a cure is promised in the next update which should be available soon – keep a close eye on Amiga Updates for more details.

Actual installation of Clarity is simplicity itself with just two leads connecting to the parallel and serial cables to the machine. The only remaining I/O connections concern the input/output signals which enter the unit via twin phono-ins and exits via two complementary phono-outs.

Alongside await the units dual I/O Midi ports which play a vital role in order to get the very best from the system. Having said that, Midi hardware isn't vital but if you have a Midi-compatible keyboard lying around Clarity offers an excellent opportunity to exploit its potential.

Once up and running the average Amiga musician will feel quite at home thanks to a familiar selection of editing commands. However the available range tools extend much further than the standard selection of cut and paste commands. Some of the more advanced options allow you to record, overlay, insert and mix within blocks from various samples which can then be touched up with the freehand or fading options when necessary.

Other features allow volume and pan adjustment in/out fading plus a selection of low, high, band and bandpass filters, not forgetting the invaluable normalise function which automatically re-computes a quiet sample to its ideal maximum volume.

For those who take their sampling seriously the ability to customise the software to suit their particular setup and requirements is essential and via the programs Options menu you can do exactly that.

Essential

From here a whole host of well thought-out features await. These include the essential play-back options which allow you to specify whether the samples emanate from the Amiga or Clarity itself.

After the playback controls come the file formats which include IFF, AIFF, AVR, with the latter of the three recommended for general applications as it works best with the built-in sequencer and Midi map functions. Yet more options allow the use of the Amiga's built-in lo-pass filter and screen blanking in addition to a definable audio trigger that kicks the sampler into record above a certain input volume. Next up comes the fast Amiga

➤



Quality control

As far as Clarity's quality is concerned there's little if anything to grumble about. However, it's true that Clarity doesn't quite match the Akais of this world.

This is primarily due to the chip design which incorporates the D to A and A to D converters – alias analogue to digital – on the same chip rather than separately as is the case with most standalones.

In addition the maximum frequency of Clarity is about 42,000 kHz as opposed to the 52,000 kHz plus offered by the high end opposition.

Although this may sound a rather sizeable difference it's worth remembering that most CDs are recorded at 42,000 kHz while the human ear will only detect sounds below 44,000 kHz.

In short, if you're spending a record company's money the Akai is the one but for the rest of us, Clarity is unbelievable for both performance and price.

settings which via a process of trial and error will squeeze the very best from machines with power processors. In a similar vein comes the Midi config controls which allows the specification of a Midi channel for use with an external keyboard plus its chosen protocol and bit transfer settings.

At last we've arrived at the final notable elements on the options menu. Save Configuration allows you to load save various setups as required, and Sample Parameters defines the default settings for a new samples – again load and save-able as required.

Custom screen

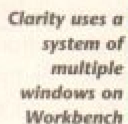
Alas the program only opens windows on your existing Workbench backdrop and doesn't initialise a custom screen of its own. Not a huge problem but an option for a custom screen would have been nice as things can become very cluttered.

Although impressive as it stands there are a few areas in which Clarity could improve. For example the existing sequencing is very limited, the lack of a timecode will mean difficulties for serious DTV and musical exploits and the lack of direct-to-disk recording means large high quality samples are only on offer to those with huge amounts of free RAM.

According to Dan Lennard the creator of the Clarity software all of the above are in the pipeline and should appear as either an upgrade or expansion pack.

Alas there's no release dates available but with the hardware ready and waiting the software should follow – providing Dan is tempted by an appropriate pay cheque, of course. In short Clarity is a very, very impressive product. It's true that for professional use it still remains a little lacking in comparison to the 12-bit SunRize sampler which is ideal for DTV applications.

If the aforementioned upgrades for Clarity do see the light of day the system would be almost unbeatable. Still, even as it stands there's nothing that comes even remotely close for price and performance.



Special effects

Alongside the general purpose editing tools await a series of five special effects including echo, delay, flange, chorus and distort. As is the case with all sampling effects, the echo and delay are in truth pretty much one of the same with slightly different parameters producing the desired effect.

The chorus and flange on the other hand are much more distinctive and produce impressive results, while the distort is just as silly as it ever was.

Like the majority of Clarity's functions, all the effects are definable allowing refinement to your particular taste. Although well implemented, it must be said that a bog standard signal processor provides far superior results but having said that even a cheap unit will cost noticeably more than Clarity itself – in short, useful but not spectacular.

SYSTEM ESSENTIALS

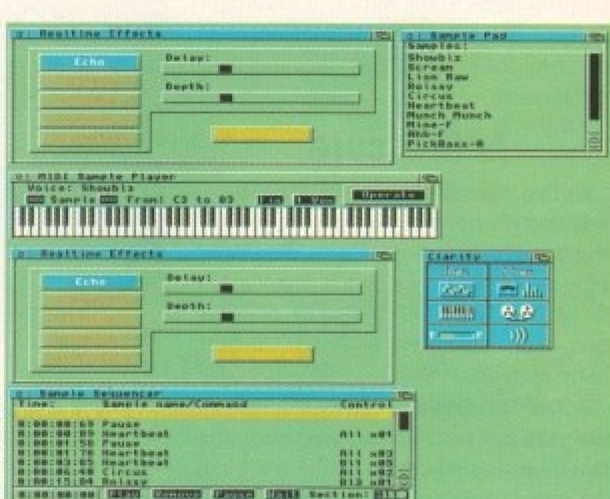
RED = Essential YELLOW = Recommend

1 Mb RAM | 2 Mb RAM | Hard drive | Midi gear required | Accelerator

The bottom line

Ease-of-Use 8/10
Implementation 8/10
Value-for-money 10/10
Overall 9/10

Supplier: Microdeal UK
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Clarity uses a system of multiple windows on Workbench

Sample Sequencer
Time: Sample name/Command Control
0:00:00:69 Pause
0:00:00:89 Heartbeat All x01
0:00:01:58 Pause
0:00:01:78 Heartbeat All x03
0:00:03:85 Heartbeat Bl1 x05
0:00:06:40 Circus All x02
0:00:15:84 Roissy Bl3 x01
0:00:00:00 Play Remove Pause Wait Section: All
Test Insert MIDI Seek # Plays: 1

The built-in sequencer is useful, but a bit of disappointment

Sample pad

The sample pad when active displays all the samples presently in RAM. Clicking on any of the names listed instantly opens that particular samples window ready for editing.

Metering

Signal metering plays an essential role and when active can toggle between three display formats – either good old VU meters, an oscilloscope or LED graphic bars.

Obviously with the sampler operating in either mono or stereo the state of each display can be varied as required. Alas, the aforesaid window only becomes active during monitoring, remaining completely inactive during recording – slightly annoying as any clipping can only be spotted on playback.

Midi control

The next icon disguised as a miniature keyboard hides arguably the most powerful aspect of the package, namely the Midi sample player which as the name suggests allows an external keyboard to take control of playback.

It works by first connecting a suitable keyboard and specifying its channel and protocol settings via the Midi config function mentioned earlier – don't panic, it's much simple than it sounds.

Then depending on your machine you set the number of voices or samples which will play via the keyboard – these can either be repeats of the same sample or a mixture. Remember a standard machine will only manage two voices simultaneously while accelerated ones will produce all four.

To specify which samples play on which keys another

Point and click

The only constant graphic element within the package is the control panel. At the top of this rather unobtrusive little box lurk the play and record buttons which speak for themselves while below await a far more curious array of icons.

feature enters the equation in the form of a Midi Map. To define a map you simply select a sample by name and click and drag over the required notes on the mini keyboard, then click the fix button to confirm your selection.

By alternating the samples and selecting various notes you can map an entire seven-octave keyboard with as many samples as your machine can handle.

The beauty of the system is that a whole group of related special effects or drum sounds can be mapped in seconds and then saved to disk complete with their map ready for instant recall.

There's absolutely no restriction on how samples are mapped, so you can use single keys or whole octaves with samples either raising or falling in pitch as required.

Ever wanted that certain sound but couldn't afford the hardware? Now you can simply record a separate sample at each octave and map your entire keyboard, saving the map as a complete keyboard sound – isn't technology marvellous?

And of course once the Midi option is set up there's no reason why the sample playback can't be triggered via a sequencer as a basic Midi on Midi off is all the sampler requires to trigger the sound.

But having said that, an external sequencer or secondary Amiga would be essential as Clarity is very heavy on the resources of the host machine. As if that's not enough, there's even more good news in the form of a Midi Dump function which allows the samples created within Clarity to be ported to a sampling keyboard or module.

As you can see, the benefits of a Midi keyboard are quite obvious. However, for those without the necessary hardware all is not lost as there is an F-key option allows up to ten samples to be triggered from the function keys with pitch adjustment applied via the numeric keypad – if you've got one that is...

Sample sequencing

One of the few disappointments of the system revolves around the built-in sequencing options which allow just single track, single sample, playback which means there's no way to take advantage of the sampler's multiple playback options.

Even the various samples on the single track won't overlap which means fairly limited appeal for most applications.

Although fairly limited, the editing and creation of sequences are pretty straightforward with options to insert, paste, and cut samples which are chosen directly from the pad list, adding definable repeats, pause and wait times as required.

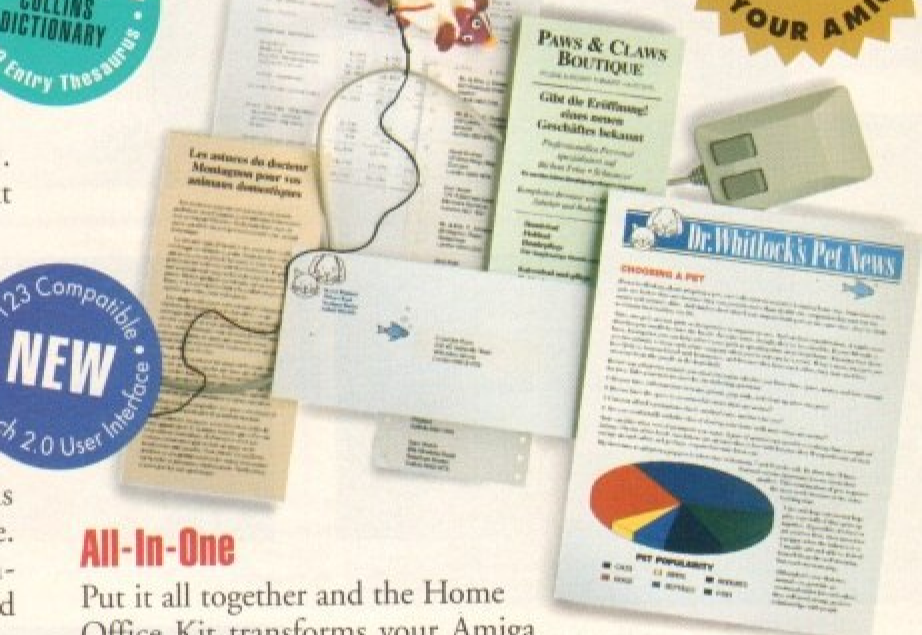
Real-time effects

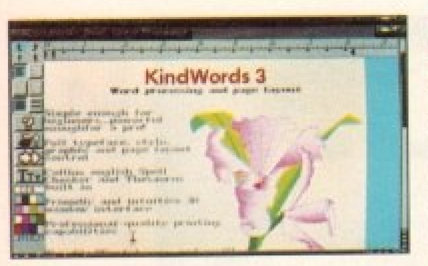
Just like every other package the Clarity software designers couldn't help adding real-time effects which attempt to emulate a signal processor.

Alas, just like its predecessors the attempt was fairly unsuccessful. Still, if you fancy a giggle after the odd pop it's fairly amusing and instantly available via the final icon on the control panel.

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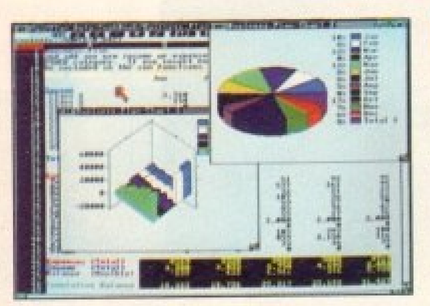




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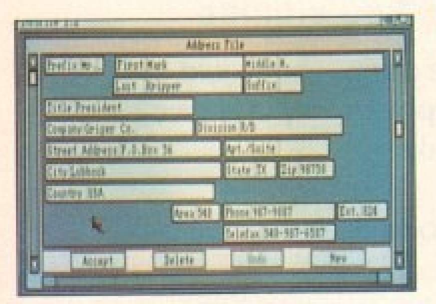
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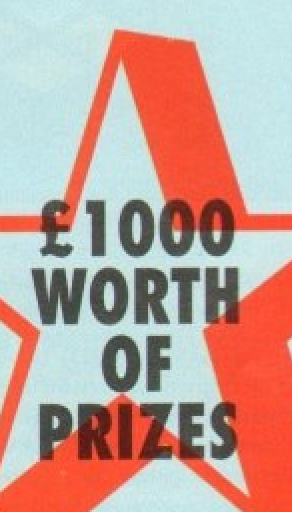
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It lets you output at your printer's highest resolution, with almost PostScript laser perfection – no matter what printer you may have. It includes a 110,000-word British-English Collins Proximity Spell checker, along with an 826,000 synonym Thesaurus. And we've got ten copies worth £99.95 each to give away.

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** This applies if background noise does not necessitate the repetition of answers*

Final Copy II
Word Processor for the Amiga
from SoftWood, Inc. the makers of Pen Pal

HOW TO ENTER

You can enter by phone as many times as you wish. Please try to avoid background noise. The winner will be drawn from all the correct enteries received.

1 How many words does the British - English Collins spell checker cater for?

a **500**
b **200,000**
c **110,000**

2 How much does Final Copy II cost?

a **£69.95**
b **£99.95**
c **£49.50**

You will be asked to leave your answers together with your name and full postal address. including your postcode. Please speak clearly, spelling out any difficult words.

Calls are charged at 36p per minute cheap rate and 48p per minute at all other times.

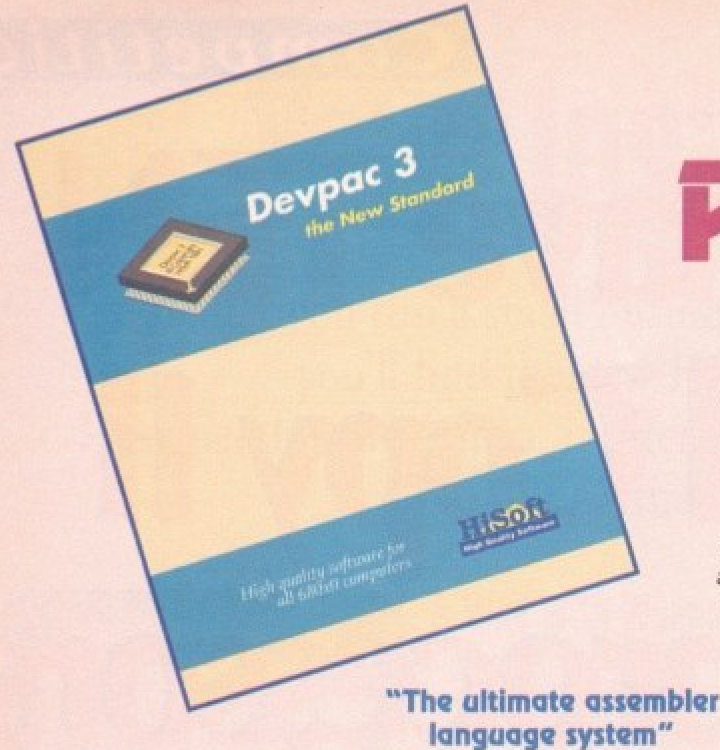
Winners of Gordon Harwood Computing's Pen Pal wordprocessor competition have recieved the new and more advanced Final Copy II instead.

January's GVP A530 competition was won by Russell Margerison of Lancashire.



0891 543309

Calling all Programmers



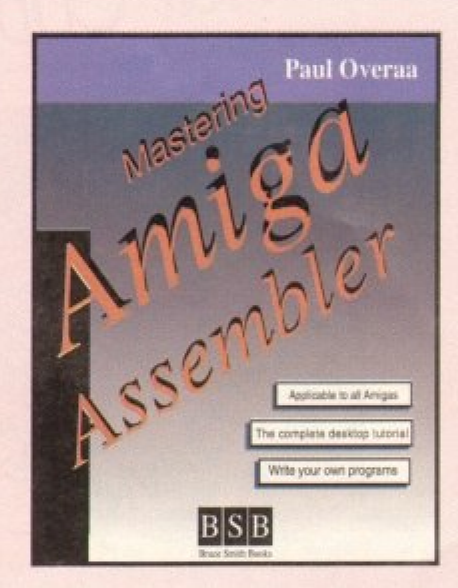
As a reader of Amiga Computing, you will already own one of our major products for the Amiga - assuming you saved the cover disk from the February issue. Now you can buy the complete manual for HiSoft BASIC 1.05, together with the full disk set (including an extended 1Mb compiler/editor and many examples) for only £19.95 plus P&P - just use the order form on the right. We also have all the official Commodore 3rd Edition ROM Kernel manuals in stock including Libraries, Devices, Hardware and Includes & Autodocs. In addition we have the excellent *Mastering Amiga Assembler* book which is free (honestly!) only when you buy Devpac 3 using the coupon in this ad. See the order form for some other special offers …

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Amiga Format Gold 4/92

The newest assembly-language development system for the Amiga. Devpac 3.03 is the most powerful and complete package ever released - just look at a selection of its features:

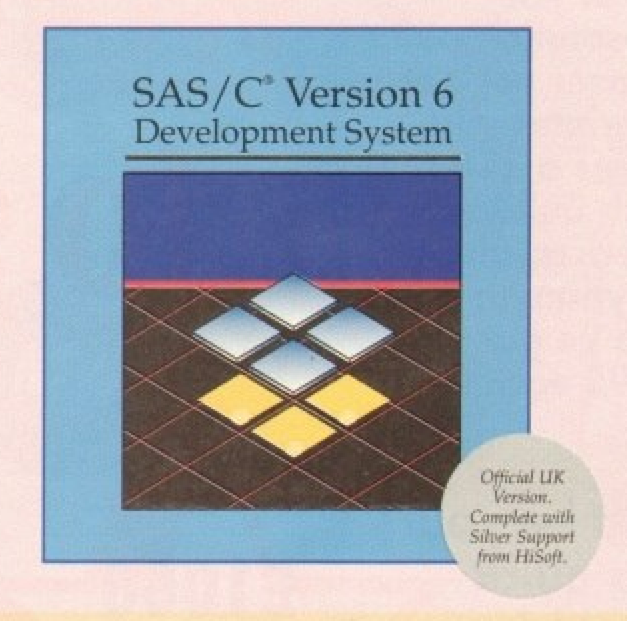
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Ezra Surf's Postbag

Got something to say through the pages of AC? Ezra Surf is our mailman, dedicated to sitting in a corner reading your letters and selecting the most interesting for publication.
Drop him a line at:
Ezra Surf's Postbag, Amiga Computing,
Europa House, Adlington Park,
Macclesfield SK10 4NP.
Please don't enclose saes as Ezra just hasn't got enough paper to reply personally. He might also have to shorten your letters, so don't be offended if you end up getting the chop.

Award help

In your letters page of Issue 55, you printed a letter headed Award Seeker in which the writer enquired about a program called Award Maker Plus. You replied by saying that you were unaware of the existence of the program.

Well, it did exist back in 1987, but whether it still does I don't know. The company name is Baudville Inc of 5380 52nd Street, Grand Rapids, Michigan 49508, and their phone number is (0101) 616 6948 0888.

I hope this information will be of help to your reader, as I must agree it is a first class program for the designing and printing of awards.

Stephen Bulmer, Waterlooville

Thanks for taking the trouble to write with your assistance for a fellow Amiga user. I hope Lance Corporal Till is reading this page and can take advantage of your helpful information.

Back issues

Please give me some information on old issues and how far back they are obtainable. If possible, quote the subscription price charged to Visa card purchasers.

Ole Rasmussen, Holte, Denmark

Back issues can be ordered from Database Direct on (+44) 051 357 1275. Currently, issues are available only six months in arrears, and the price for overseas deliveries is £5.10 per copy.

To subscribe for a full year, European readers can expect to pay £44.95 including postage, but check out each month's subscription pages for the latest offers to subscribers.

Honest Pole

Hi! I had an illegal copy of Amos Pro, and I really like the program, but I don't want to have a pirate copy of it.

In my copy, there was a help file that said if I wanted the Compiler, extensions, and so on, I should contact Europress, so I'm writing to you from an address I found in an old issue of *Amiga Computing*.

I would like to buy a legal copy of Amos Pro. Is that possible? If so, can you mail it to me? What is the cost of shipping and how much is the program?

Also, do you accept money transfers, and if you do, what is the account number as I can only pay in US dollars.

Semir Gebran, Krakow, Poland

Thank you for your letter and your honesty. I have passed your details to Europress Software who, incidentally, can be contacted at the same address as Amiga Computing.

The software people should be contacting you, but you can always write to them directly or call them on (+44) 625 859333.

If more Amiga owners were to display such integrity, and buy legal software even when they have access to illegally pirated copies, the piracy problem would be much less serious.

Air crash

I read your magazine every month from cover to cover with great interest. However, a letter headed "Fly by night" recently caught my attention.

I too have had a problem with my version of the A320 flight sim. I made a copy of the flight log and carried out a few training flights, then once I'd mastered things I tried a duty flight. The first two flights went all right, but when it came to saving the evaluation, the software crashed and I was not able to boot from that disk again.

Thinking that I had done something wrong, I re-copied the flight log and the same thing happened. Following the instructions in the manual, I disconnected all my peripherals, but with the same result. As my package is more than six months old, and because I don't have a receipt for it, I decided to return it to Thalion in Germany, thinking that as I had registered with them I had a kind of guarantee. This was in the beginning of November, and I still have not heard from them.

Bob Cooper, Calne

The problem sounds simple enough - Thalion obviously have an inadequate customer services department (assuming they have one at all, that is).

If you have registered with the company as a user and your software ceases to function, you have every right to expect them to back you up with a replacement, though whether or not this translates to a legal claim depends on the wording of the company's registration card.

Rather than spend money on phone calls or letters to Germany, UK users in a similar position to yourself and Mr Rose should contact Tony King on 021-442 2050. Mr King is Thalion's PR representative in this country, and I'm sure he'll be happy to help.

A better deal from Commodore?

Star Letter

I have just finished reading the article in your January issue on the A1200 and the fact that it is only £100 more than the A600. I bought an A600 two months ago for £399, before the £100 price drop, so when I read about the A1200 being the same price, I felt sick and cheated by Commodore.

Ripped off is the word! I could have bought a better machine for the same price or saved myself £100, and when you're unemployed as I am, this is a lot of money. I even wrote to Commodore but they just replied with some excuse about business considerations and so on. They could at least have offered us some compensation but, no, they haven't bothered.

Is there anything we can do? What do you think about it? All I can say is what a bunch of cheats!

Christopher O'Connor, Stoke-on-Trent

I and I'm sure many thousands of other Amiga owners sympathise with your predicament. The old faithful A2000 I have sitting at home is, though still a workhorse I rely on for all sorts of jobs, looking rather dated beside the A4000 and A1200 machines with their AGA graphics we use at the office.

However, I don't blame Commodore for putting my ageing machine out to grass. This sort of thing has being happening since the first ZX80 owners looked on in envy as their friends bought the ZX81 or even the fantastically powerful Spectrum.

There are ways and means of course by which progress can be achieved, and as there have been so many changes in the Amiga range over the past year, you are rightly annoyed with Commodore for not proceeding with a little more sensitivity towards their existing customers.

However, we can't complain about the release of the A1200. It is a giant leap forward for base-level Amiga owners and one which the whole industry has welcomed.

Stories in the Amiga press, confirmed by Commodore, that new machines sporting the AGA chips would be released before the end of the year should have been warning enough for those prospective Amiga owners who wanted more than just a games machine.

If these reports didn't reach your ears, then you really should buy Amiga Computing more regularly!

Seriously, though, if Commodore are concerned about the thousands of Amiga users in your predicament, a new upgrade offer would seem the answer. There have been generous deals in the past whereby users of A500s have upgraded to the A1500 or CDTV pack, so an A1200 upgrade offer would seem to be the best way out of a possible dead end for A600 owners.

If, on the other hand, Commodore are happy with rocketing sales for the A1200 and do nothing to bring A600 owners in from the cold, we'll all know whether loyalty to the customer or the bank balance is of more importance, won't we?



Hicks - the return

My thanks to Simon Hunter, who contacted me via the CiX bulletin board and uploaded a sample from the film Aliens, proving that Hicks did in fact say "Drake! We are leaving!". I hope this settles what was threatening to become a contentious issue among AC and Aliens fans.

Kickstart bug

I purchased your January issue, and I cannot get Fighting Warriors to work. I have followed the on-screen prompts, but every time I use the Make-a-disk icon, it comes up with "disk is write-protected". This happens whether or not the write protect tab is in the enable or disable position. Can you tell me how to get round this?

Kevin Pryke, Fareham

Your problem is caused by a bug in Kickstart 2.04. When a user boots from a write-protected disk into a Workbench environment, such as when the CoverDisk boots, then tries to format another disk, the target disk will always appear to be write-protected.

This is a Kickstart 2.04 problem rather than a CoverDisk boo-boo, and it can be neatly circumvented by booting with the CoverDisk write enabled. For all the hassle this bug has caused our readers, we at AC would like to send Commodore's software engineers and Kickstart bug-testers a big, wet, sloppy New Year kiss of the kind administered only by ageing spinster aunts in your worse nightmares.

Protext puzzle

I am a new subscriber to your magazine and I am very pleased with the content of each issue I have received so far. You have really excelled yourselves with January's CoverDisk of Protext 4.3. What a brilliant wordprocessor! Thank you very much.

Just a couple of questions (there's always a catch – Ed). When I set up the configuration to my individual preferences and save to the program disk, the computer replies "please insert volume protext_program_disk in any drive", then asks "please insert dictionary/utilities disk in any drive", after which it says "failed to copy printer driver to config file".

However, when I go back into the program the changes have been made. Why all the disk requests? Am I doing something wrong?

Martin Kaminski, Horsham

Protext as sold in the high street comes on two disks, one for the program and one for the dictionary, though we've squeezed the best bits from the dictionary drive onto the same disk as the program for our CoverDisk.

When Protext configuration is altered, the program thus becomes confused as it tries at first to copy printer files and so on from a disk which isn't available.

Don't worry about the machine's error messages. As you've already pointed out, the configuration utility works in spite of what Protext thinks.

Trade war

I have been following the news on GATT talks and so on with some interest, and it has occurred to me that the Amiga world could be badly affected by any possible trade war between Europe and the USA.

Would I be right in thinking the vast majority of software and hardware is imported from across the Atlantic? I've just made a quick review of my own Amiga setup and, calculating the dollar value of the equipment and programs I have, then adding 14 per cent for the devaluation of the pound plus a further random figure of ten per cent for trade duties, I reckon I would have paid about £250 more for my kit under today's conditions.

I know the various politicians are doing their best to sort things out and that the real problem is to do with French farmers, but what if the worst comes to the worst?

If only they would give us a definite answer or date for hostilities to commence. At least that way I could bring forward any spending plans I have and save some money!

John Baldwin, London

You may have spotted the odd news story concerning possible Amiga price rises in the new year. Due to the fact that Amigas are really only assembled in Irvine as opposed to built from the ground up and that most electronic components are paid for in dollars, even if they don't originate in the USA, roughly £30 could be slapped on the price of all A600 and A1200 machines.

On the subject of a GATT-induced trade war, even if such an event came to pass it is highly unlikely that trade tariffs would be imposed on electronic goods, as the main area of contention remains agricultural.

You may end up paying more for your Paul Masson, but RAM expansions and software should be unaffected.

Falcon intrusion

As a recent A1200 owner, I was disgusted when, on flicking through your January issue, I came across an advert for the Atari Falcon! What is the meaning of this despicable act? Don't you check the content of the adverts going into your hallowed pages or couldn't you care less about the feelings of your loyal readers?

Now on a lighter note, there's one thing niggling me about my new machine. It has a plastic blanking plate on the back and everyone else's is metal! Seriously, though, I can't find any big improvements over AmigaDOS 2. Why are Commodore suddenly adding lots of numbers to a little changed operating system?

Finally, are there plans to release a CD drive for the A1200, and how about a 1.76Mb floppy? Where are all the third-party developers when you need them? Do I win £10 for spotting the Falcon blunder?

Steve, Selby

No, you don't receive £10 for spotting what is fairly obvious in the first place. The ad was paid for and the advertiser has the right to advertise any product he or she pleases.

Obviously, with xenophobic responses such as yours being the norm in the Amiga world to any and all moves made by the stone-aged ST range, response to the ad will be so poor that it will probably not run for long. This is a case of the readers deciding which ads go in the magazine.

As for Kickstart 3.0, if you think few changes were made to accommodate a fully 32-bit machine with vastly different chips, 256 colours, 1.76Mb floppies, and so on, you have a measure for change which can only be described as geological.

You weren't the only Amiga user who frowned when the A1200's floppy turned out to be of the old 880k variety. Commodore have no plans as yet to install the HD floppies as standard, but several companies, prominent among whom is Power Computing, are developing 1.76Mb external floppies as we go to press.

Latest reports are that the drives are not fully supported by the A1200's I/O chips, a fact which our tech ed, Dave, is trying to clarify with Commodore, and Power have said that the resulting interface could push up the price of the add-on drives. Keep an eye on ACAS and the news pages for details as we receive them.

The A670 CD-ROM drive should, according to Commodore, be available now, although a spring launch is more likely. The device will take advantage of the PCMCIA slot on the machine's left-hand side, and if all you A600 and A1200 owners would like Commodore to supply a pass-through slot for further expansion, now is the time to write to them (or us).

A600 heading for Hell?

I have owned an Amiga for two years now, and in both of those years Commodore have released new machines, causing incompatibility problems. What I would like to know is when will it ever end, and how dead is the A500 Plus?

Is there any truth in the rumour that the A600 will be joining the A500 in that big open space known as hell? I was fortunate, or so I thought, to upgrade to the A500 Plus last year, thinking that I was safe for a few years. What now?

I have also heard that the A1200 is not as standard as Commodore would like it to be and will be upgrading it further next year. Is it really necessary to buy a 1200 or am I all right for the moment? I am very frustrated and upset that Commodore are forgetting us A500 owners. Maybe it's time to buy a PC.

Mick Wilson, Barwell

Hopefully, Commodore's policy of continually improving the Amiga range will never be dropped, and the flow of better, more powerful Amigas will go on for a long time to come. Incompatibility problems are a pain in the backside, but unlike some manufacturers (who may or may not have released an avian relative to the turkey over the festive season), Commodore are not attempting to hide the fact that the A1200 is compatible with only about 60 per cent of Amiga games.

At the moment, Commodore say they have no plans to stop producing the A600, and it is highly unlikely that they will. The stated intention is for the A600 to become the Commodore 64 of the 90s, and judging by the incredible pre-Christmas sales of this cheapest ever Amiga, the A600 looks set to continue for a while (famous last words? – Ed).

As for the A1200 being upgraded, there will be a number of third-party add-ons to boost the machine's processing power, as you'll see from this month's news pages.

The AGA chipset may in the next couple of years be superseded by the AAA (triple A) chips, but this doesn't mean the machine is going to be dropped. The A1200 is now the entry-level enthusiast machine and will remain so for at least a couple of years.

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Unique additional standard features include FLASH ROM 'future proof' technology and LAYOUT - a powerful document description language. The LP1200's unique internal FLASH ROM, which holds the printer controller firmware, can easily be updated as new developments in technology occur. This protects the investment you make in buying a Ricoh LP1200. Other manufacturers would require you to buy a new printer! Internal FLASH ROM and industry standard FLASH ROM IC cards can also be used to permanently store fonts, macros, graphics and extra emulations. Again, unlike the competition, the LP1200 includes LAYOUT a powerful document description language as standard, which offers unique opportunities to develop custom made printing systems. Forms and document templates can be designed and stored electronically in the LP1200's FLASH ROM, alleviating the need for pre-printed forms!

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Official RRP (excl. VAT)	£945	£1,179	£1,099	£1,099	£1,195
Maximum resolution in dots per inch	300 x 300	300 x 300	300 x 300	300 x 300	400 x 400
Windows 3 Driver @ 400 dpi	-	-	-	-	YES
Print Speed	6ppm	4ppm	4ppm	5ppm	6ppm
Straight Paper Path	YES	-	-	-	YES
PCL 5 Printer Command Language	-	YES	YES	-	YES
HP-GL/2 Vector Graphics included	-	YES	YES	YES	YES
Resolution Improvement/Enhancement	YES	YES	YES	YES	YES
Standard RAM	0.5Mb	1Mb	1Mb	1Mb	2Mb
Full A4/300 dpi graphics with standard RAM	-	-	-	-	YES
Warm Up Time	<45 secs	<60 secs	60 secs	33 secs	45 secs
First Page of Text Output	<20 secs	<40 secs	34 secs	20 secs	<15 secs
Document Description Language included	-	-	-	-	YES
Flash ROM	-	-	-	-	YES
Upgradable Firmware	-	-	-	-	YES
IC Card Slot	YES	-	-	YES	YES
Scalable Resident Fonts - in HP LJ III Emulation	-	8	8	0	8
Resident Bit-Mapped Fonts	11	14	14	16	14
AGFA Intellifont Scalable Font Technology	-	YES	-	-	YES
HP LaserJet III Emulation Included	-	YES	YES	-	YES
EPSON FX Emulation Included	YES	-	YES	-	YES
IBM ProPrinter Emulation Included	-	-	YES	-	YES
Standard Tray Capacity	100	70	100	200	100
Protective cover on standard tray	YES	-	YES	YES	YES
Cost per copy**	1.65p	2.00p	1.71p	1.64p	1.65p
Min-Max Paper Weight in gsm	60-157	60-105	60-120	60-131	60-157
Able to print on OHP Film	YES	YES	YES	YES	YES
Able to print on card (157gsm - Manual Feed)	YES	-	-	-	YES
Standby -Noise Level	<40dB	31.7dB	<35dB	38 dB	<38dB
Printing -Noise Level	<50dB	43.3dB	<46dB	50 dB	<48dB

**As quoted by manufacturers - 3/4/92

All Trademarks are acknowledged

IT'S A WINNER!

Shortly after its launch, the LP1200 had scooped accolades from most of the major press reviewers . . .

"The winner is the Ricoh ... its graphics performance is staggering". Shopper Labs Best Buy COMPUTER SHOPPER - AUGUST '92



AUGUST '92

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LAA 5210	Developer/Toner Cartridge	£65.00
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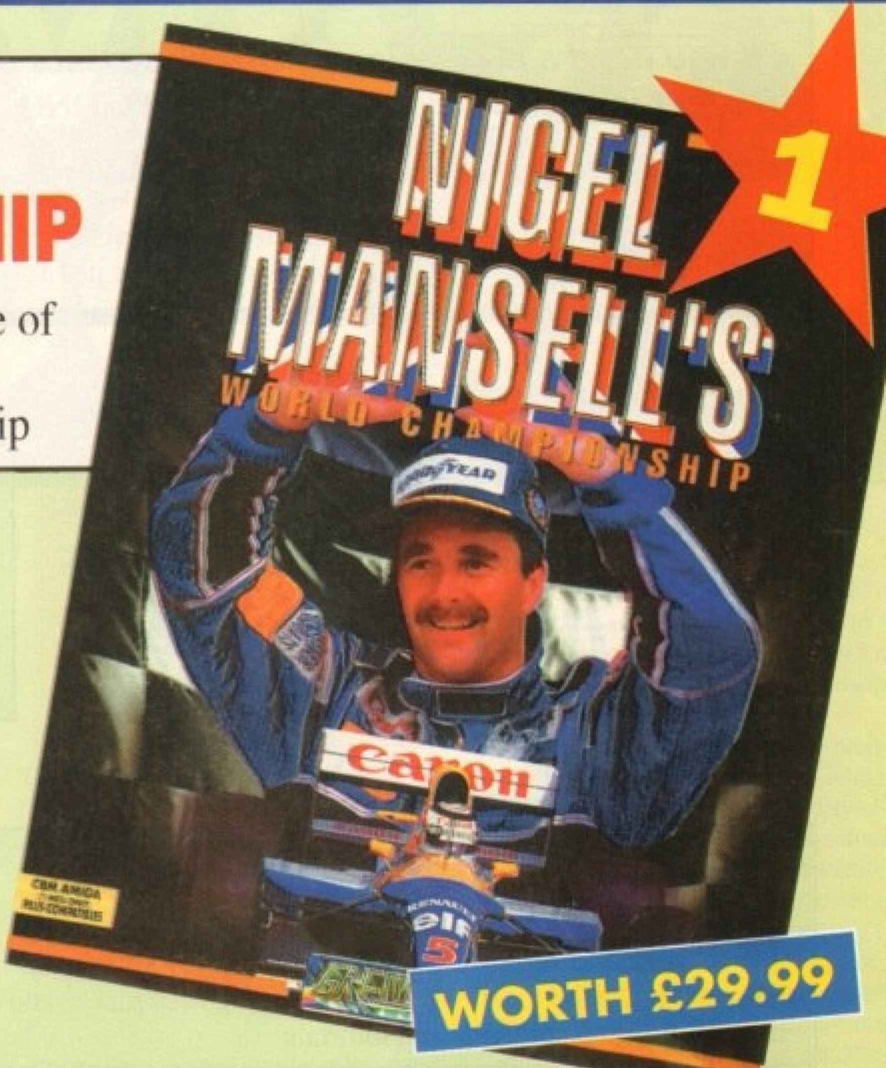
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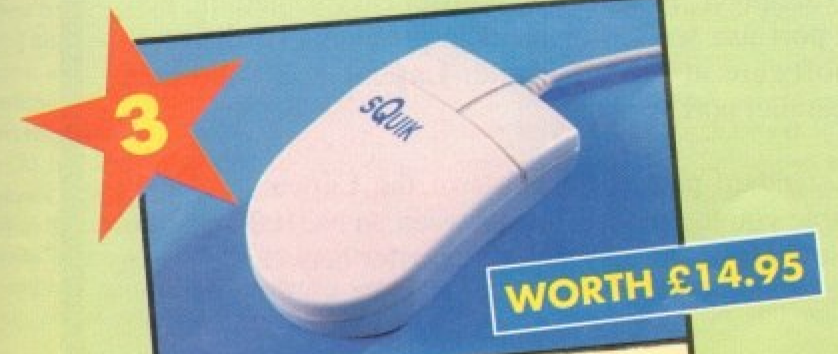
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Announcing Lapcat...

a new easy-to-use transfer solution for sending files between different types of computer.

Lapcat was designed for the NC100, Amstrad's new Notepad Computer. To make file transfer easy something new was needed; the difficulties in sending files via the serial port are well known – the problems of different connectors, different types of leads, baud rates and the software at the other end. **Lapcat** is a combined software/hardware package that transfers files quickly via the parallel port.

The **Lapcat** software is built into the Amstrad NC100. The standard package consists of the **Lapcat** lead plus software on disk for the computer of your choice. This will enable you to transfer files between an NC100 and your chosen computer. **Lapcat** is not just for NC100 owners because you can buy software to transfer between any two of the supported computers. No technical knowledge is needed.

Lapcat prices: (Please state clearly the type of computer you are using – PC, Atari, Amiga).

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ARNOR

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This month spring cleaning starts in earnest with a whole host of revisions ranging from ray tracing to titling.

We'll open with an old favourite that's had some stiff competition in recent months but has once again silenced its critics with a series of improvements which reaffirms its position at the top of the image-processing tree.

The package, or should I say family of software, in question comes from those masters of the computer image, ASDG. Although the upgrade in question primarily concerns MorphPlus, this in turn spreads directly to our old friend ADPro, as any improvement in one becomes a shared asset between both.

The changes revolve primarily around animation and batch processing. Areas in which the ADPro of old made hard work of, especially considering the programs impressive selection of ARexx commands.

In an attempt to silence numerous moaning punters, ASDG released FRED – an automated frame editor and batch processor designed to appease even the most irate animator.

Alas at the time ASDG were naive enough to think that busy users would then make the additional effort to write the scripts which the ADPro and Fred combination could then incorporate into their batch processing exploits.

This was simply not the case as few took up the challenge of ARexx script writing which in effect left the potentially excellent Fred rather redundant.

At last the ADPro software engineers have come to their senses and released what the vast majority of users have been waiting for – a version of Fred that comes complete with a mouth-watering selection of pre-written ARexx scripts which



Yet another stylish backdrop about to be wiped away

can be easily incorporated within Fred without even an ounce of ARexx awareness on the part of the user.

For example, you can now load any number of frames in any format, apply the operators you want, render the results in the resolution and format of your choice and then save out as an IFF, Jpeg or even a complete animation.

By pure chance the reference to animation leads us on to the next major improvement in the form of two additional dithering modes, both of which produce excellent results but perhaps equally important use only a fraction of the deltas employed within ADPro's original dithering modes. The end result is smaller files sizes and in turn an increase in speed during playback.

In the past I admit to being one of the first to complain about the lack of easy automation within the ADPro environment. Now however I'm more than happy to take it all back as in my opinion at last the ASDG image processing system is complete.

Thanks to the combination of ADPro, MorphPlus, and of course Fred, ASDG can rightfully reclaim the static and animated image processing crown. If you can afford the asking price it's a must...

For more details contact HB Marketing on: 0753 686000
MorphPlus (including Fred): £199.95

Broadcast Titler2 SHR

If you're a relative newcomer to the Amiga, the words Broadcast Titler2 may be completely new rather than something of a distant memory.

Although newly updated, the program has been around a long time which in itself speaks volumes for the quality of the product in the fickle world of software. Even though fairly elderly it nevertheless remains the Amiga's premier dedicated video titler.

For those who've not come across the package as yet a brief synopsis is in order. It's true that presentation/multimedia packages such as Scala do an effective job as both presentation systems and pseudo titlers.

BT2 on the other hand has no pretensions towards anything other than pure titling. Their new variant has been designed specifically to take full advantage of the relatively new Super-hi-res screen modes offered by machines equipped with the ECS chipset and above found within machines such as the A500 Plus, A600, A1200, and A4000.

If equipped with the necessary Super Denise, the program can now display in 1,360 x 550 pixels, providing a true 35 nanosecond pixel resolution that's equivalent to full commercial broadcast quality – a feature which can't be matched by any other Amiga-based titling or presentation ➤

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A classic example of the colour output of BT2

• PLAYBACK OPTIONS
· Presto Pages for Rapid Access Sequence Playb
· Preview Status Bar
· Play-Sequential, Rando
Presentation, GPI Start
· Loop/Key Advance Mod
· Auto-Booting Seq

The features speak for themselves, but they don't come cheap

system. Unlike many pseudo-titling systems, BT2 offers full video spec overscan in among a whole host of professional titling essentials including a selection of high quality anti-aliased fonts which can be expanded via two font packs offering 20 new anti-aliased fonts.

If that's not enough for your particular graphic appetite, a bitmap font converter comes with the package allowing the user to convert standard bitmapped fonts into their anti-aliased BT2 alter egos.

Super hi-res is not the only display platform offered by the software, as both standard and super hi-res text can be mixed on the same page – although not on the same line.

As you can see from the screenshots, the package can present an impressive array of colours on a single page – up to 320 in fact – regardless of the machine the package is running on.

This is particularly impressive when you consider that non-AGA Amigas have a maximum of just 16 colour when operating in hi-res.

Although the 320 offered by BT2 appears to be something of a minor miracle – as ever – there's a small price to paid as the software will not allow multitasking. In fact to exit the package you must re-boot the machine.

Alas, the aforementioned screenshots, although colourful, cannot relate an equally powerful aspect of the package, namely the huge variety of effects that can be applied to either entire pages or individual lines. Unfortunately it's impossible to apply page and line effects on the same page but in practice it's a small price to pay for the exceptional colour and the quality of the available effects.

Having raved about these varied features it's time for the bad news, which primarily revolves around the price – at a little over £250 it's just about as much bad news as most people can handle on the average day.

Still, as someone undoubtedly once said, you pay for what you get and in the case of BT2 you get a broadcast-quality product that may not be as simple to operate as some but nevertheless provides as-yet unparalleled performance for the professional videophile.

From more details contact
HB Marketing on: 0753 686000
Price £255.50

Hot news from Activa

While we're on the subject of ray tracing, it's time for a quick mention for the Scandinavian creators of Real 3D who are about to release their sequel to Real 3D v1.4 later this month.

At a recent visit to Alternative Image I was lucky enough to get a sneak preview of the package which as yet is untitled but nevertheless reveals a degree of power and complexity which puts even our old friend Imagine to shame, especially concerning animation.

As ever, *AC* will be the first to bring you the definitive review as and when the package is released, but for the time being I can confirm that the aforementioned Real 3D 1.4 Turbo will be retailing for just £60 when its all new replacement hits the streets.

This is nothing short of astonishing considering the former price tag of the package approached £300 prior to this new release – obviously Activa have a lot of confidence in the appeal of the new program. Let's hope their confidence is well founded...

For more details contact Alternative Image on: 0533 440041
Price for Real 3D v2 as yet to be confirmed.

The Essence of Imagine

If you're among the ever-growing band of Amiga 3D modelling and ray tracing fanatics, the word Imagine will be a familiar one. Although a real enthusiasts' package in its early days, it has now matured into an almost unrivalled ray tracing and animation system.

Due to the success and complexity of the package a family of support products have appeared including a number of reference books designed to complement the rather vague manual. Now the add-ons have spread into the software in the form of Essence, a collection of 65 all-new textures which via intelli-heads are compatible with all versions of Imagine and its predecessor Turbo Silver.

Unlike various supplementary ray tracing products, Essence are mathematical textures and not brushmaps, which means that each individual point on the object is mathematically shaded rather than simply wrapped in a brushmapped skin which all to often produce less than perfect results.

In addition, because all the textures are mathematically generated they will not degrade no matter how close you zoom in to the object, plus there's the equally important ability to customise the texture to your own design.

For example, the size of the texture can be completely controlled and this includes altitude textures which produce the illusion of ridges or bumps on the surface of the object.

A particularly fine example of the advantages offered by mathematical generation is the Mandelbrot texture which when zoomed in on reveals more and more detail without losing any clarity.

Animation is another strength of the collection as the textures themselves can be animated within a sequence. In the case of the assorted fractal noise offerings this can mean swirling clouds of gas or smoke within the anim.

An equally impressive and useful addition is a digital clock display which can be defined to as many decimal points as you wish then automatically animated within the scene to produce countdowns and assorted control panel displays.

Fortunately the collection doesn't consist entirely of glamour effects – in fact there's a reasonable selection of utility textures which are ideal for everyday scenes.

Such textures include numerous floor coverings, marble, bricks and checks for both spheres and cylinders, tree bark plus a series of transition textures which can of course be animated as required.

As you can see, Essence is what many Imagine fans have been waiting for, but as usual anything to do with Imagine tends to be to rather complicated.

This is personified by the various fractal noise textures which have an entire chapter of the manual devoted to them in a fairly unsuccessful attempt to explain their proper application.

In short, if you're an experienced Imagine user Essence is highly recommended. However for the newcomer I'd strongly suggest another six months with the Imagine manual before investing in a collection you may not be quite ready for.

For more details contact Micro-Pace UK on: 0753 551888
Price £49.99



One of the old favourites of raytracing after the Essence treatment

PageSetter, more than most DTP packages, has been skulking around in various guises since the Amiga's early days. From its inauspicious debut as a knock-down budget black-and-white page layout program to the relative sophistication of the later versions of PageSetter 2, the program struggled to shine in the shadow of its big brother, ProPage.

The market for such packages has been shrinking over the past year as more and more wordprocessors, the latest example of which is the startling Final Copy II, have adopted DTP-like properties.

Luckily for Gold Disk, the gap between current wordprocessors with basic DTP features and full blown professional packages yawns wide enough for another species to survive in the resulting ecological niche.



PageSetter 3 is suitable for colourful brochures...



...and ad flyers off all shapes and sizes

Typesetting goes technicolour

Stevie Kennedy tries to become a back bedroom publishing tycoon with the first AGA full-colour DTP package, PageSetter 3

The problem is that the niche has very well defined and difficult to meet survival requirements, and only the tightly designed inhabitants are going to make it through the winter.

PageSetter 3 (PS3), with its evolutionary history, has a running start in that the essential elements are all in place to begin with. The program's designers long ago decided exactly which features to leave in and which to exclude in order to fend off the smart Alec wordprocessors while not impinging on ProPage's market.

Version three of the program is simply a logical step on from the PageSetter 2 era, taking advantage of the new AGA chips to bring true colour DTP to the Amiga for the first time. The program has never been designed to produce long documents and, though capable of handling multiple-page flyers or fanzines, is not the ideal tool for such jobs.

In reality, the package lacks a master page facility, will not create or view left and right facing pages, and is best used as a simple page layout utility for such publications as advertisements, single page flyers, and business cards.

Page size can be up to 17 inches square, but most will settle for the standard selection of A4, A5, A3, and so on which are available at the click of a button.

As usual, custom pages can be created by simply choosing a measuring system (only two – inches or centimetres – are on offer), then providing values for width and height.

Once the page creation process is complete and the user has a page on-screen complete with columns, the first job he or she will want to do is import some text or jazz up the page with a graphic or two.

Unfortunately, though text importation is not a problem, graphics must be in either IFF bitmap (ILBM) or ProDraw clip format.

No other popular DTP format, such as Encapsulated PostScript (EPS), TIFF, or the IFF DR2D structured drawing standard is recognised, so although the supported graphics cover most of the clip art available in the public domain and any output from packages such as DPaint, PS3 will be unable to communicate with many art packages.

For example, SoftLogik's Art Expression, reviewed elsewhere in this issue, saves its files in EPS and DR2D, both accepted standards.

However, it does not support the Gold ➤

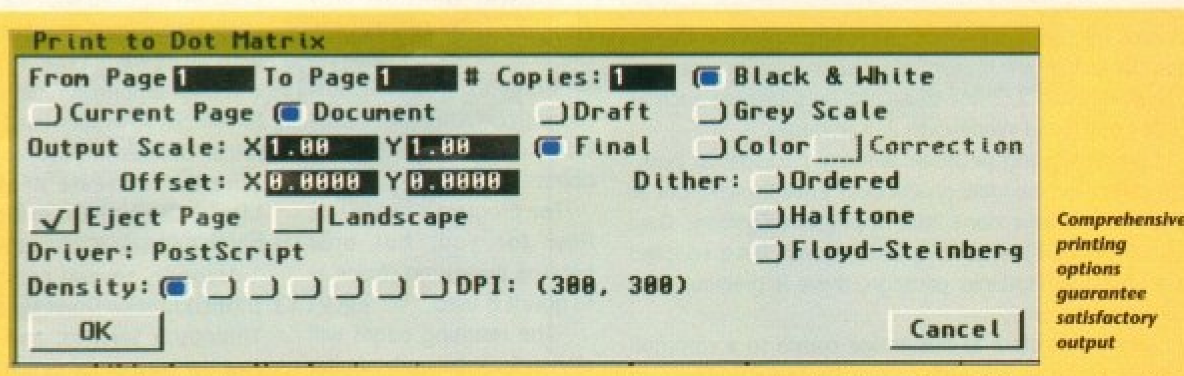
Output options

Printing is one area in which PageSetter 3 is very close to the more expensive DTP packages. Both PostScript and non-PostScript printing are supported, and though the non-PostScript option is labelled "Dot Matrix", PS3 is quite happy talking to the gaggle of bubblejet and inkjet printers currently popular among Amiga owners.

PostScript support, remarkably enough for a mid-range package, includes full colour PostScript, with control over roll paper printers such as the linotypes used to produce film for professional printers.

In addition, the user can scale the page, define X/Y offsets and halftone screen density, choose between landscape and portrait, or decide to print a draft copy to test a layout.

There's also a print to disk facility and downloadable fonts can be included by clicking a toggle switch. In all, there's little which the average user could wish for which has not been included.



Comprehensive printing options guarantee satisfactory output

Non-PostScript printing is equally well catered for. Unlike most packages I can think of, scaling is included as an option on the dot matrix requester, accompanied by the more common density buttons, a landscape option, and dithering controls. Colour printing is supported and all non-PostScript output can be printed at up to 300dpi. For those nervous about printer drivers, PS3 does not, unfortunately, use its own drivers, so the Workbench preferences drivers, augmented by specific shareware programs, will have to be used.

Final non-PostScript output quality is therefore more or less dependent on the printer and printer driver rather than PageSetter.

Disk ProDraw standard, demonstrating the latest example of the petty lack of co-operation between manufacturers which has bedevilled the Amiga market since day one.

This complaint aside, PS3 has inadequate graphic support, even for a mid-range package, and should support at least the EPS format if it is to make good its claim to be a "complete desktop publishing system".

Text support is much better, and there are filters for popular wordprocessors such as ProWrite and excellence! (note that no British WPs are supported), as well as Ascii and PC-style Ascii, so there should be few problems on the text front at least.

Hotlinked

If previously available text or graphics are not used, the PS3 owner can take advantage of either the Article Editor or Graphics Editor for the creation of text and graphics from within PageSetter. Both programs are included with the package and both are hotlinked for ease of use, though using them in this way requires about 2Mb RAM.

To use the Article Editor, a user simply clicks in an empty box or one containing text, then selects Article Editor from the Edit menu for PageSetter to load the program and pass any text in the box to it ready for changes.

When editing is complete, quitting out of the Article Editor returns the edited text to PS3 and the user can continue with page layout.

Faster editing and the ability to change text without doing so in the clumsy environment of a DTP package are the main advantages of the system, but as the Article Editor is really a cut-down version of Gold Disk's Transwrite wordprocessor it would also suffice as a basic first line text engine.

The Graphics Editor is capable of editing 32-colour ILBM graphics and passing them back and forth in a similar fashion, and has enough features to act as a simple standalone paint package, but as it is incompatible with any other type of graphic its use is limited. I would have been much happier if a link between PS3 and ProDraw 3.0 had been supplied.

PostScript output in colour to a linotype from a budget package? Yum!

Within PS3 itself, graphics tools available from the on-screen tool box include line, rectangle, polygon, and ellipse, any of which can have user defined colour, line weight, fill, and fill pattern.

There is no facility for gradient fills (vignettes), but these can be added by owners of ProDraw 3.0, so those users in need of high impact pages should find most of their needs satisfied.

Design limitations include no rotate facility and a lack of skew or flip, but possibly the most inflexible aspect of PS3 is Gold Disk's Fordian insistence on boxes, which can be any shape so long as they're rectangular.

As text will flow only around a box, and as even the built-in ellipse drawing tool creates an ellipse surrounded by a box, automatic text flow around irregular objects is impossible.

The program handles text flow for you, but only because there is no choice as to how it is used.

The resulting pages will always look basically similar unless the user resorts to the incredibly old-fashioned method of making the target object permeable (so text would normally flow straight through it), then surrounding it with several small invisible boxes round which the text will flow. This is a time consuming, but effective, cheat's method of creating the appearance of irregular text flow, and one which Gold Disk themselves seem to have used on the back of the PageSetter packaging.

Another slightly dodgy piece of information on the packaging is the claim that PS3 "supports AGFA Compugraphic and PostScript type 1 fonts". Strictly speaking, PS3 supports only Compugraphic fonts, and will use Type 1 fonts only after conversion using the Gold Disk font manager program supplied with the package.

However, font manager has problems with shareware Type 1 fonts, the most common among Amiga users, as it looks for official AFM files used by commercial fonts. Utilities are available in shareware libraries to create AFM (Adobe Font Metric) files from the PFB printer font files, but the process is a lengthy one.

Happily, several companies, among them EM Computergraphic, George Thompson Services, and the Font Shop (see the Locator for details), now offer collections of Compugraphic fonts, so the problem is not as severe as it was a year ago.

In all, PageSetter 3.0 is a flawed product, but not flawed enough to put it out of commission. At its present retail price, it still offers the best value-for-money budget DTP solution around, with the only possible competition coming in the form of Final Copy II.

Those without the resources to go for PageStream or ProPage would be well advised to give PS3 a look, but I can't help thinking it would have been a much better product if not designed by a company with the protection of its flagship product (ProPage) in mind.

A palliative palette

It was with a certain amount of pain that professional Amiga users watched the Mac stroll away with the lucrative DTP market back in the bad old days when the Amiga could only muster 16 colours in any decent resolution, so the release of the AGA chips and the first full colour DTP package comes as a great relief.

Though hardly a professional package, PS3 is nonetheless much more useful for colour productions than either ProPage 3.0 or PageStream 2.2 simply by virtue of its use of 256 colours.

These are displayed quickly, dithered almost as rapidly as Final Copy II handles its graphics, and make judging whether a certain colour of headline suites the picture it will sit beside much easier.

Any 24-bit or HAM8 IFF imported for use in PS3 is automatically converted to 256 colours, a process which can take a long time with large files, but once on-screen they can be moved around quickly and easily, despite the fact that the on-screen picture might represent an image file of well over a megabyte.

Users wishing to take advantage of this sort of DTP work should be aware that at least 3Mb RAM is required.



The Graphics Editor is a good idea, but of limited use

Parlez-vous Amiga?

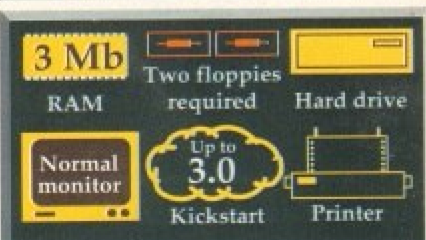
Unlike ProPage, PS3 has no ARexx support and thus no macros (or Genies as Gold Disk insists on calling them), and the lack of any general hotlinking capacity, not even the Workbench 2/3 hot links used by programs such as Final Copy II and Wordworth 2, is irritating.

Communication between as many packages as possible makes for the ideal productivity environment, but as Commodore have done little to promote Dynamic Data Exchange (DDE), and few manufacturers have adopted the SoftLogik HotLinks package, there is precious little talking going on.

ARexx is as close as the Amiga comes to a common language, but as it is only spoken by those prepared to learn a programming language it is not acceptable as a punter-based standard.

On the other hand, though of more use to we non-programmers, sticking to a cobbled together in-house standard and throwing in a couple of editors is not an acceptable alternative to working with other manufacturers or Commodore to establish a DDE standard.





The bottom line

Ease-of-use 8/10
Implementation 6/10
Value-for-money 9/10
Overall 7/10

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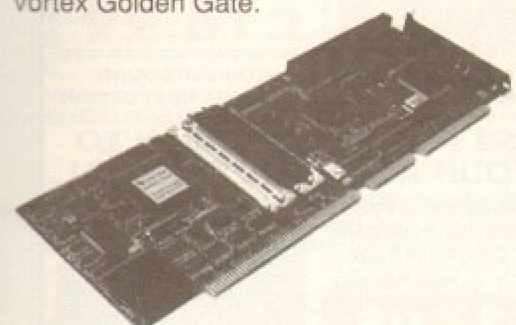
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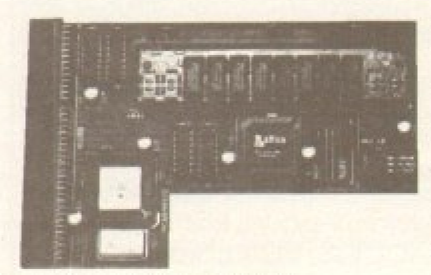
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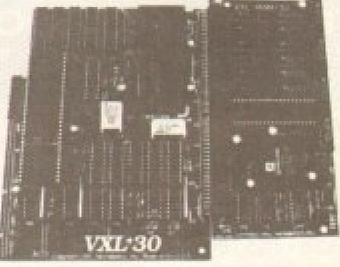
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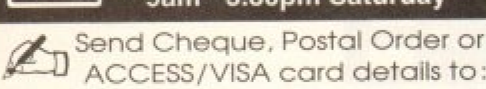
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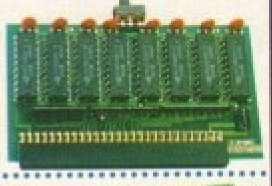
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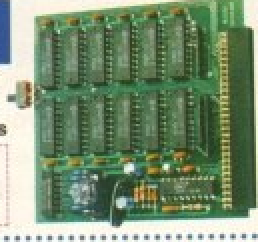


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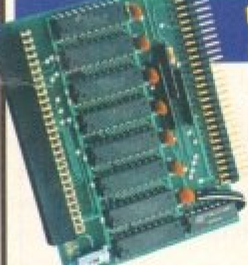
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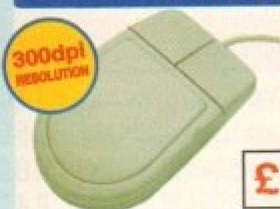
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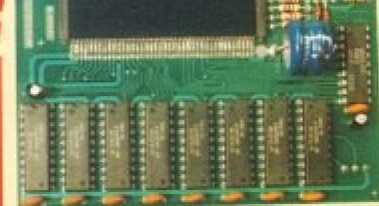
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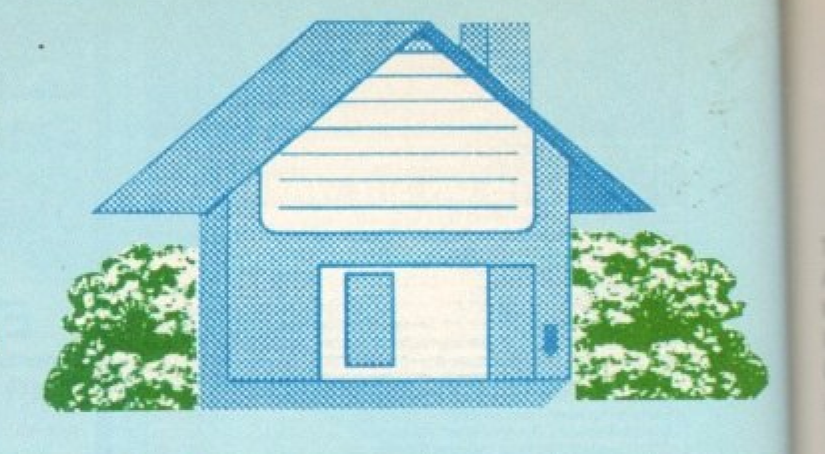
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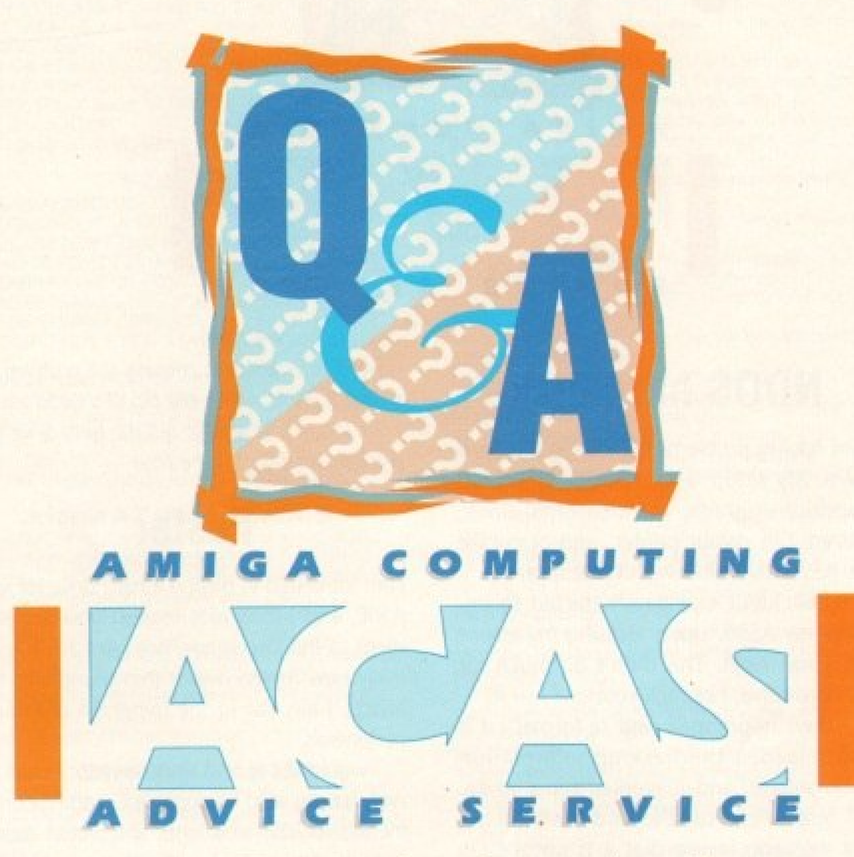
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A1200 disk problems

Two weeks ago I purchased a new A1200 Amiga which works very well on its own. However there is a problem – it does not like either of my external drives. These are both PC880s and both are fine on the Amiga 500.

The trouble arises when reading from the disk in the external drive. Quite randomly it will start claiming that there is a "Read Error on block ???" – not the same block each time. When I click on cancel it carries on as normal. The trouble is quite intermittent but is annoying when it occurs.

Furthermore, occasionally it refuses to load a disk saying that the disk is "NDOS". Remove and replace the disk and it runs OK. This occurs with the disks supplied with the machine as well as older ones.

I reported this matter to Wang who duly bought another new A1200 to try, and I am sorry to say that the same thing occurred. So it would seem that there is some incompatibility with Power Computing's PC880 and the A1200.

I would be interested to know if you have heard of anyone else having this problem. All the disks concerned give no trouble whatever in the A1200's internal drive and I am convinced that none of the items are faulty.

I have spoken to Commodore at Milton Keynes but they stated that they had not encountered the problem and that their own brand of drives give no trouble. I would be pleased if you could throw some light on this matter.

L G P Farmer, Northumberland

The simple answer is that the PC880 is not compatible with the A1200, but this is not Power Computing's fault, it's actually down to Commodore themselves.

The older Amigas had two ground wires, one which was connected to the outer metal casing of the disk drive's connector and the other to one of the pins. Commodore have now left one of the ground wires off.

This results in line noise occurring sometimes, which results in read/write errors. Thus not only is the PC880 not compatible with the A1200 but many other drives will display the same problem.

Power have announced a PC880 drive specifically for the A1200, so when ordering an external drive from them, be sure to state that it is for use on the A1200. Unfortunately though, due to the modifications that have to be made to the drives to make them compatible, Power have said the cost for an external A1200 drive will be £5 more.

The good news is that Power are making an interface for the A1200 which enables people who have purchased their new A1200 drive to read and write 1.44Mb disks, as their external A1200 disk drive is already fitted with a 1.44Mb drive unit.

How to fill that empty trap door

I have an Amiga 500+ and the trapdoor on the bottom of my machine is empty. I wondered if there is anything I can put in it other than a 1Mb RAM expansion card?

I would also like to know what the best printer is for under £300. Also is the Philips CM8833-II a multisync monitor, and is productivity mode any good?

Do you know any good ARexx manuals because I can't find anything on ARexx in my Amiga manuals. Why do Commodore supply software without telling you how to use it?

Mark Discon, Surrey

Other than RAM expansions which come in various sizes from 512k upwards, about the only other useful add-on which will fit the trap door expansion is a PC emulator. PC emulators allow you to run PC software on your Amiga which gives you compatibility with virtually all business software packages.

As for which printer to buy for under £300, this is not an easy question to answer because of the huge range of printers available for the Amiga series. You have not mentioned whether or not you want to be able to do colour printing. If you only want to print in black and white then I would suggest either the Canon BJ10 for around £180 or the HP DeskJet which is about £300. Both of these printers give good text quality and are easy to use.

If you wish to print in colour then it's a bit more difficult to recommend a model but you might like to take a look at the Citizen Swift 240C or the Star LC24 200C, both of which are 24-pin colour printers and cost below £300 if you shop around.

The Philips CM8833-II is not a multisync monitor so it would not be able to display productivity mode, which by the way is extremely good.

There are lots of ARexx books on sale which can be found in most good book shops or in adverts in this mag. The reason why Commodore don't give manuals away on ARexx is that not many people use it and including the manuals with Amigas would put the cost up.

Power Patch

I have a problem with last month's PP program. It seems OK when loaded manually, but if entered in startup-sequence it gives error 104 (which I couldn't find). My Amiga 100 uses Workbench 1.3, and I have a second disk drive and 1Mb Supra 500RX. I have tried Kickstart 2 but this gave the same error.

I hope this is fixable, as I'd like to be able to use this program with DPaint, and send the guy some money

John Gray, London

Unfortunately we don't have an Amiga 1000 to test your problem on, but if the program runs when called from CLI and not from your startup-sequence then I would try putting the command which calls PP in a different place in your startup-sequence.

No sound

I've bought a new Amiga A600 computer. When buying it I was told that I didn't need a monitor, so I thought fine. When I took it home and set it up I found that the sound didn't work. I tried undoing the plugs, wires and turned off all the switches, then I started all over again. No matter how many times I tried this the results were still the same. Still no sound.

So the first thing I would like to ask is what can I do to make the sound work? Also I was told by a friend that a monitor would be better than using the television. I want to know is this true? I would be very much appreciate it if you could help me by answering my questions.

P Bahia, Middlesex

On the back of Amigas with built-in TV modulators there is small black switch next to the connector for the TV cable. This switch is the problem – simply switch it to the other position and you should get sound through your TV. The switch is used to select what frequency the sound is broadcast on.

Monitors do give improved picture quality over TVs. This is due to the fact that before a TV can show the picture from your computer, the image must be turned into a signal which the TV can understand. This results in loss in picture quality.

If you use a monitor the signal coming from your computer is already in a format which the monitor can understand, so there is less loss of quality and you get a far superior picture.

Copyright

In the first place I would like to make a compliment to your famous magazine which I am a proud reader of and buy every month. I can say your magazine is very helpful to my problems and also the CoverDisks are really great!

The articles in the magazine are very informative on all Amiga subjects, such as

➤

the new CD-ROM drive, and your game reviews are very nice to read. Anyway keep on making this great magazine for the big group of Amiga users all over the world which I am one of.

But now let's go to my own problem. I have an idea to write a sound-designer in Amos Basic such as OctaMED-Prof or SoundTracker, but I don't now how to start it. I have tried to make a startup screen but that's where the line ends. Also I don't know if I will get any problems with copyright problems with so many programs already existing.

Please can you help me with this big problem because I'm completely closed in. Also can you tell me if I should write this in C? I hope to hear soon what the answer is for my problem and send greetings to everyone on the magazine.

Theo Wiersma, Holland

On the copyright situation, as long as your program doesn't look too much like a program which already exists and you haven't just taken their code and altered it slightly then you will be OK.

Now down to which programming language to use. By the sound of it you already know how to use Amos so I would stick to Amos – and with the D-Sam commands which we gave away on the CoverDisk in February's issue the task will be a lot more simple.

OctaMED player

First of all, congratulations on a great mag. Secondly, I am having trouble using songs that I make on OctaMED. You see I am trying to put a song in the startup-sequence using the command "Octamedplayer name", ie name=song title.

Everything goes all right, that is the Workbench screen comes up and the song plays. However a message appears saying "CTRL-C to continue".

The trouble is that I want the music to keep playing through whatever comes next in the startup-sequence ie pictures and the like. However, nothing else will happen until you press Ctrl-C, which stops the music.

I have tried the songs on other music players with no reward. There is a lot of info on the disk, such as Read Me files, but they seem only to be talking to people with an A-Level in computer lingo.

Can you please tell me how to do this as OctaMED is a brilliant program for musos like myself and it would be a shame to go back to non muso-friendly progs to get a bit of music on your demos.

S McKenna, N Ireland

The problem is that when you call up OctaMED it is not returning back to your startup-sequence until it has finished playing your tune, so the answer is to tell OctaMED to start running and then return control back to your startup-sequence.

This can be done by adding the line:

```
run >nil: <nil: Octamedplayer songname
```



NDOS hard disk

I am having problems with my A590 hard drive. My setup is an A500 1.3, 1/2Mb trapdoor upgrade, extra external drive, Citizen 224 colour printer, and of course the A590 hard drive with 1Mb upgrade.

By accident one day, I started to initialise my A590. Upon realising my error I did a soft reset. This didn't do much for my hard drive, I can tell you.

I then re-prepped and re-formatted it and reloaded the back-up information back onto it, and it worked for a while, but now when I use the hard drive all I get is a message saying that it is not a DOS disk. As there are no other disks in any other drives it has to mean the hard drive.

I have tried to re-prep and re-format again but to no avail. I would be very grateful if you could help me out in any possible way. Thanks for all your help and also a great magazine.

G Mitchell, Queen's Own Hussars

It sounds like you have quite a serious problem. Your best bet is to get hold of a PD disk containing some hard drive utilities, and do a check on your hard drive to see if has been irreparably damaged or whether there is just a damaged sector.

There are plenty of companies in this mag which will be able to supply the software you require. It may be that you might have a virus which is causing the problem if so don't panic – with the aid of a good virus killer you will be able to get the hard drive to work again if that is the case.

Faster

I am interested in buying a hard drive for my A500, and I read with interest your supplement to the December issue. As I am a relatively new Amiga owner (ten months to be exact), I am lost in the minefield of Amiga peripherals.

I would like to add an accelerator board as well, having seen Microprose Grand Prix on a friend's A1200 (amazing!), and would dearly like my Amiga to handle the graphics as smoothly as that.

I understand I can get a combo drive from GVP, with both of these add-ons in it, but this is going beyond my small budget (I'm only a student!) by some margin. I read about SIMM chips for extra RAM, and blitter chips for god knows what, and I'm completely bewildered to say the least.

What is the difference between chip and fast RAM, as my A1200 friend said I'd need more chip RAM to make graphics smoother?

On to the matter of the accelerator, how fast would it need to be to make things faster? I use Vista quite a lot, and I am endlessly fed up of waiting an hour to get a half decent picure.

I understand that the A1200 runs at about 14MHz, whereas tha Amiga 500 runs at 7.14MHz. I have been advised to buy the A1200, but as I'm only a leisure user, with no need for 32-bit graphics or sound, this seems a waste of time, not to mention money.

What do you recommend I do? Please help a very ailing Amiga user to become a little more wise, and have a better computer.

Lee Taylor, York

First of all I hate to correct you but the A1200 doesn't have 32-bit graphics or sound, in fact it has 32-bit processing and 24-bit graphics and only the same sound as before.

Now with that out of the way the GVP is indead the best hard drive combo around, but at about £679 for an 80Mb drive and a 40MHz processor it is certainly not cheap.

Personally I would sell your existing A500 and then buy the A1200 with say a 60Mb hard drive and also the Microbotics memory/co-processor card. All of this will cost around £670 if you shop around.

You will then have a machine which will run considerably faster then your old one and have the added bonus of far superior graphics. Even though the cost is virtually the same either way it is better to spend the money on a new machine rather than trying to fix up an old one.

Muddy pictures

I wonder if you can help me? I own an Amiga 500 Plus with an external drive, and I have recently bought a Panasonic KX-P2123 colour printer, which I use with DPaint III.

My problem is that when I print out pictures they are generally very dark and always banded. Is there a program, preferably PD to keep the price down, that will rectify this?

Jon Richards, Hants

There is a PD program which will help you out with your problem called Print Studio. It is available from most good PD libraries but if you have trouble locating it then give Vally PD a ring on 091-587-1195.

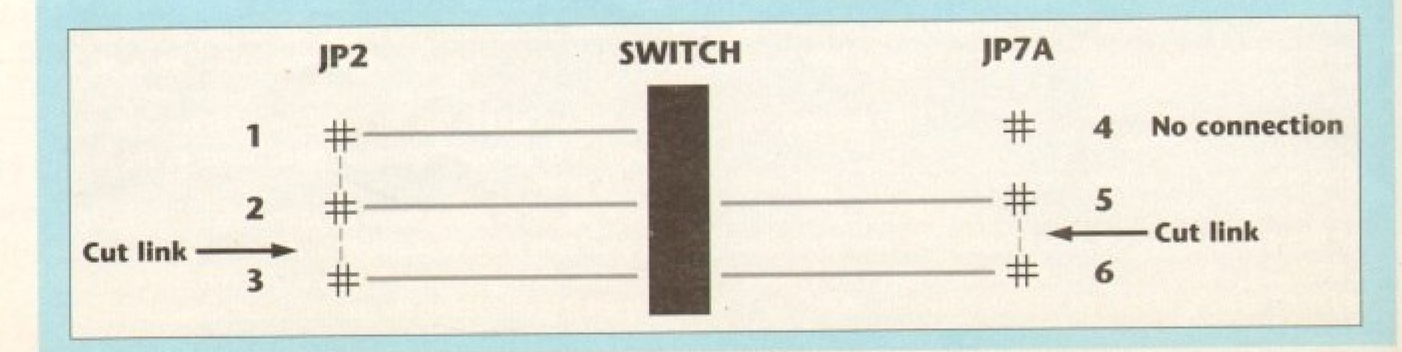
Also, the problem you have described may be down to your ribbon, so try another ribbon and set the density to about 2in your prefs drawer. Hopefully this will help

Incorrect diagram

● There was an error in January's ACAS pages concerning the memory switching diagram. Contrary to what is shown on the diagram, there should be no connection between track 4 and the switch. The correct version is printed below.

If you followed the printed instructions carefully there should have been no problem, as it was only the diagram that was incorrect. Attempting the alteration following the incorrect diagram will result in a green screen and possible damage to your machine.

Obviously when *Amiga Computing* prints tips from readers which other readers decide to undertake then this is done so on the readers own responsibility.



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-	= Kickstart 1.3
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++	= Kickstart 2.xx only
^	= Also works on Kickstart 3 machines
^^	= Kickstart 3 machines only. (AGA).

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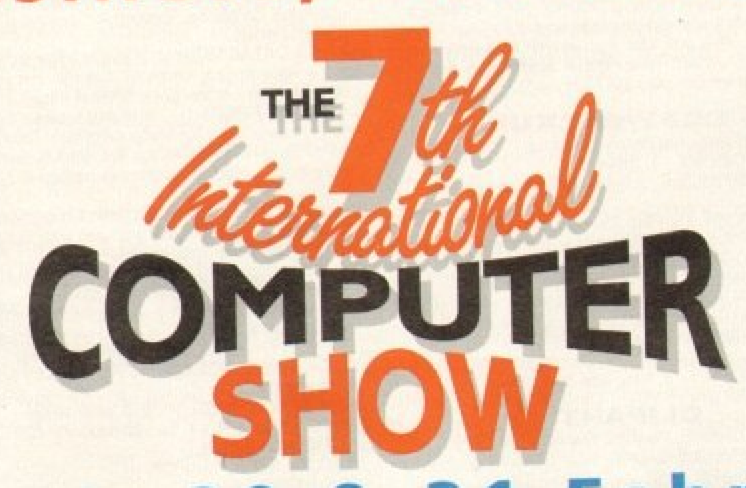
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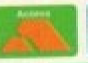
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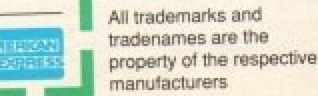
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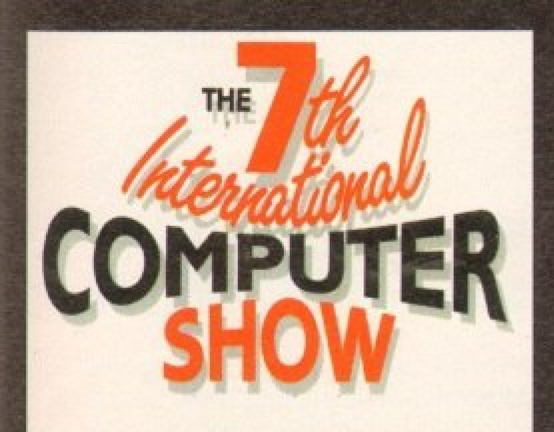
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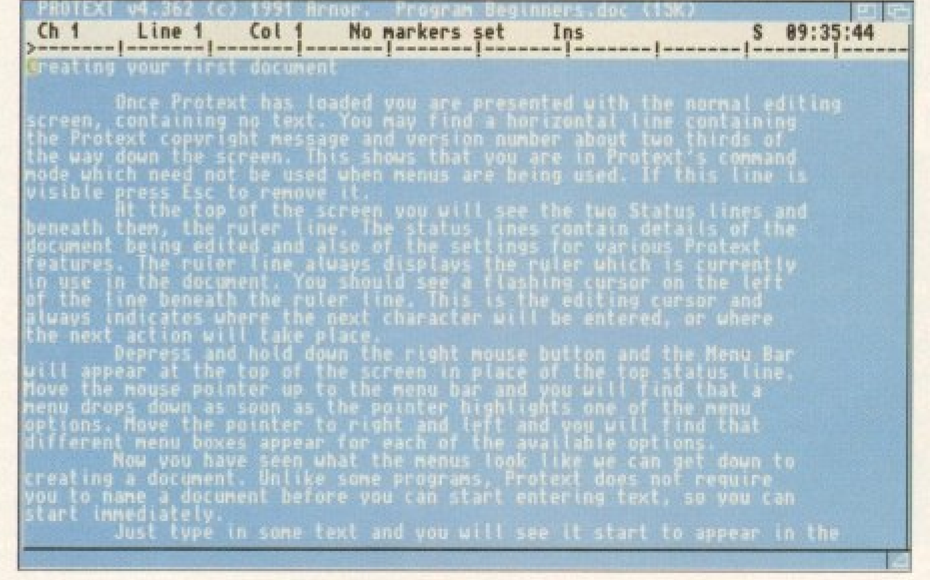
Protext power-up

Learn how to master Protext through its powerful command language in this final part of our tutorial

Hopefully by now you will be quiet confident with Protext, and feel able to go on to some of the more advanced features Protext has to offer.

Over the last two issues of *Amiga Computing* we have showed you how to create and manipulate your documents, edit documents, work with more than one document at a time and also how to spell check documents.

In this issue we will explain how to use the Print option and how to take advantage of the command line option in Protext.



Protext's layout makes creating Documents an easy task

Printing documents

Once you have spell checked your document, it is time to print it. Before going any further, make sure that you have your printer switched on and on-line. Select the Print Text... option in the Print menu and the printing dialogue box will be displayed.

The printing options available in the dialogue box may seem quite complex initially, as there are many boxes, but in many cases the default settings are all right. If you have already printed something, the previous settings are retained and become new defaults.

The current printer driver is displayed at the top of the dialogue box. If you use more than one printer and see that the wrong driver is selected you should use the cancel box and load the correct printer driver with the Load Printer Driver option in the Print menu.

There are three Destination boxes and these determine where the output is sent. Each of the boxes is exclusive, so clicking on one box will de-select whichever was previously selected. The Printer box is highlighted by default.

Selecting Screen will select output to be sent to the screen. As far as possible the document will be displayed as it will appear on paper, although not all printer-effects can be displayed on-screen.

If the File option is selected the cursor will automatically move across to the Filename box for you to enter the name which you want to use to save it by.

When this option is selected everything is sent to the file as it would be to the printer. The file may then be printed at any time without the need to load Protext by outputting it to the printer.

Note that printing to file does not produce plain Ascii text files. If you wish to create a plain Ascii file, use the Ascii Save option in the File menu.

Highlighted

The second line of boxes covers Options. Either Single Sheet or Continuous will be highlighted and, again, these are mutually exclusive. Selecting one will turn off the other.

The third box, NLQ, may be used with dot matrix printers to set them into "Near Letter Quality" mode and is also used with some laser printer drivers to select a different paper tray.

The third line, Which pages?, also contains three exclusive boxes, with All being the default. Odd and Even refer to whether the pages to be printed will be (or would be, if page numbers are not being printed on pages) even or odd numbered.

This is useful when you want to print on both sides of paper as you can select Odd and print the document. Only odd numbered pages will be printed. Replace the paper the other way up, select Even and print the document again to print the even numbered pages on the reverse of the paper.

The fourth line, Number of Copies, is self-explanatory, but is useful in that you only need to use the print command once and can get on with something else (assuming background printing is selected – this may be toggled on in the Option menu) while several copies are printed.

In the lower right corner of the dialogue box are two boxes, Start at Page and End at Page. These are used if you want to print only a number of pages, but default to page 1 to last.

When you have chosen the various settings you want to use, all you need to do is click on the Go box.

Parts of a document can also be printed by marking the block you want to print, then selecting the Print Block option in the Print menu. The print dialogue box settings should then be set, as before.

As well as printing the current document, it is possible to print an existing document file without loading it into Protext. Select the Print a File option and the file selector will appear for you to select the file to print. Once selected the

PROTEXT v4.362 (c) 1991 Arnor. Program Beginners.doc (15K)
Ch 1 Line 1 Col 1 No markers set Ins $ 09:36:37
PRINTING OPTIONS
Printer:
Destination: Printer Screen File Filename:
Options: nlQ SIngle Sheet Continuous
Which pages? ALL Odd EVen Start At page: 1
Number of copies: 1 End at page: LAST
GO cancel

Printing Documents is easy with this well laid out menu

PROTEXT v4.362 (c) 1991 Arnor. Program two (15K)
Ch 1455 Line 24 Col 58 Mks [] Ins $ 09:41:57
FIND AND REPLACE
Find string
Word Global All ignore Spaces
Backwards Case specific Number 1
Marked block GO cancel

Searching for text can take ages but not with Protext

print dialogue box will appear, as usual.

Background printing allows you to get on with further editing, while the document is being printed, after a brief delay while Protext fills its printer buffer. This can save a lot of time when long documents are being printed.

The Print menu has an Abandon Printing option which may be used irrespective of whether background printing is being used, but it also has two further options, Pause Printing and Resume Printing, which are only available if the printer buffer is in use and contains text to be printed.

Telephone

These are useful when you want to pause printing, perhaps to take a telephone call, and continue afterwards.

Note that you should not exit Protext while background printing is in operation. If you do, background printing will cease.

The best way to understand the different printing methods is to load a suitable document and experiment with the different settings. If you don't want to waste paper, select the Screen option.

Making macros

A macro is a sequence of key presses which can be stored and used at any time with a single key press. The keys used to recall macros are A to Z on the main keyboard when used in conjunction with the Alt key and the special function keys on their own and in conjunction with the Shift, Ctrl and Alt keys.

The main advantage of macros is that if you perform a sequence of events on a regular basis you can program a macro to do the same job with only two key strokes.

Making and using macros may sound complicated at first, but you'll soon get the hang of it. A macro is rather like a video recording – you press record to record events which happen and then you play them back.

With the macro maker you also press the record button but this time it records which keys you press, and when you have recorded your macro you just press the key you have assigned your macro too.

To start to record a macro all you have to do is press Ctrl-F1 followed by the key you wish to save the macro under ie Alt-A. You can do this from the edit mode or the command mode.

Once you have started the record mode you then simple press the keys you wish to record, to finish recording you press the Ctrl-F1.

'Background printing can save a lot of time with long documents.'

Once you have recorded your macros you can then save them to disk so that you can use them as many times as you like. When Protext loads it will always look for a file containing predefined macros – if it exists then it will be automatically loaded.

To save your macros once you've created them you enter the command mode by pressing the Esc button once and then type SVK. This will then display the message SaveKeys filename: followed by a flashing cursor.

Simply type in the path to where you wish to save to and the name of the file which must be "Protext.Key", ie:

```
DFO:Protext.Key.
```

You must also save this file to the disk which you load Protext from – this can be your hard drive or the floppy you load from.

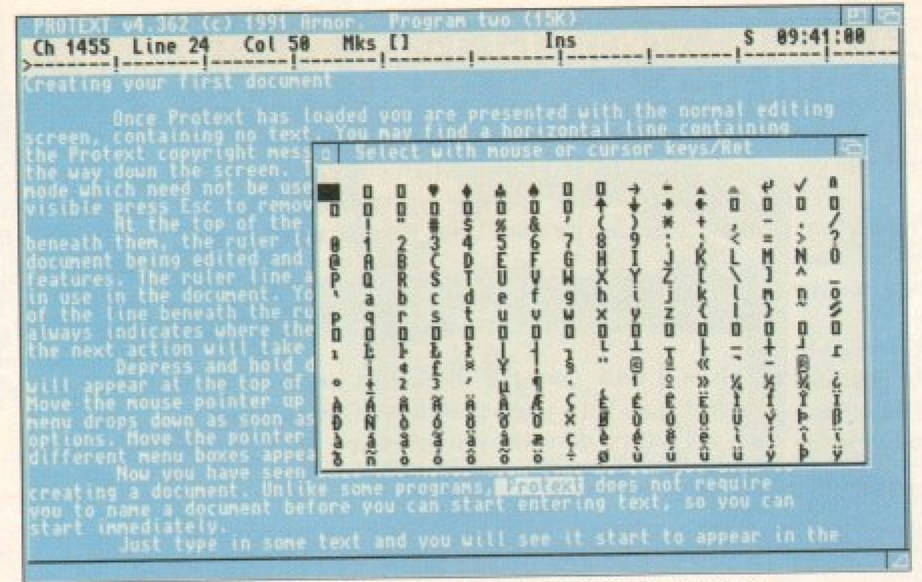
When you save a macro what you are really doing is saving all the macros you have defined in one file. This means you cannot save just a single macro and then load it up when you want.

You must define all the macros you think you will need then save them as one file, then every time you load Protext it will automatically load the Protext.key file into its memory.

If at a later stage you decide to add extra macros then all you do is load Protext which will automatically load your macros and then enter the macro record mode as already explained, and then just record your new macro.

You can also change an existing macro by following the same steps as adding a macro but when you type in the key you wish to save the macro under simply add the existing key you wish to change.

When you have added new macros or changed existing ones you must save them out again as Protext.key in the same directory.



No need trying to remember those tricky keyboard commands for special charectors

Recording macros

Now you have an idea how to create macros and save them we will try making a macro as an exercise.

Activate the record mode by pressing Ctrl-F1 Then press the key combination you wish to store the macro under say Alt-A.

Now press the buttons you wish to record, first press the Esc key then type:

```
S df0:Demo
```

and press Return. Now to end the record mode press Ctrl-F1

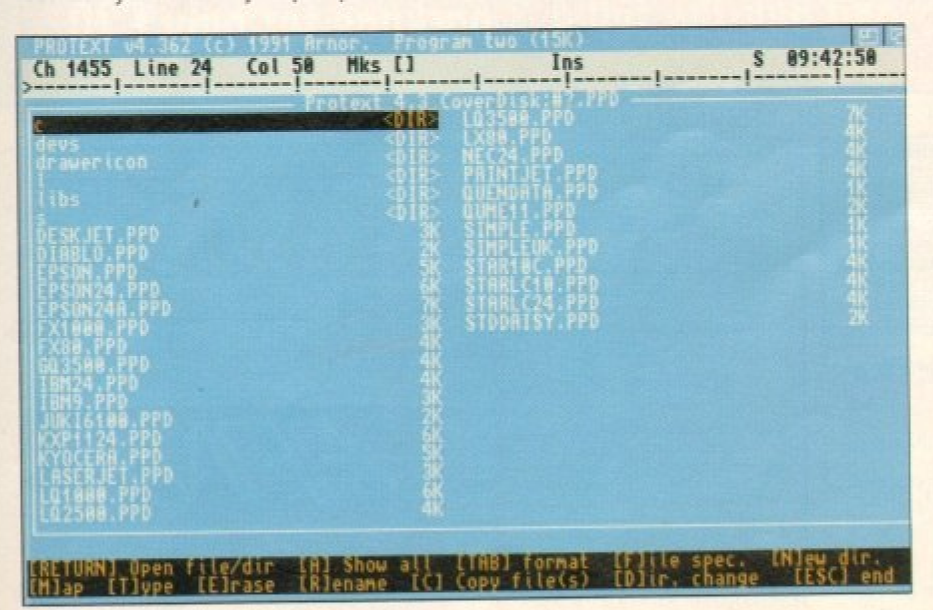
What you have just done is to create a macro to save your current document under the name of Demo on your internal drive. To activate this you simple press Alt-A and the macro will be activated and do the rest of the procedure for you saving you the work and time of typing in the command yourself.

Assignable keys

You can assign macros to 94 key combinations these are as follows:

F1-F10
Shift + F1-F10
Ctrl + F1-F10
Alt + F1-F10
Alt + A-Z
Shift+Alt + A-Z

Even though you can assign 94 macros it is not advisable to use this many as every macro you assign takes up a small amount of memory, and if you are restricted already by your machines memory assigning to many macro will shorten the amount of text you can fit into a document.



Protext use easy to understand file handling system

Directory Protext_4.3_CoverDisk:

Protext in it's split screen command

Using the Command mode for extra speed

As you have already learned, Protext can be controlled from pull down menus, but if you dislike having to pull down large menus and then trying to find the option you require, you can use the command line.

The command line is a way of giving Protext commands to carry out without having to use the pull down menus. Using this method of controlling can be a lot faster than the menus in Protext.

To use the Command Line you must first call it up. To do this you press the Esc key, when you will be presented with a window opening up in the lower half of the screen.

This is the command line window. Once you are in the Command Line mode you will be presented with a flashing cursor. This is where you type in your commands.

Some of the commands which you can use can be abbreviated to save you time typing them in eg if you wanted to save a file called Demo then you would type in:

```
s demo
```

This will now save the file called demo to your current drive, but if you wanted to save the document to say you external drive then you would type:

```
s df1: demo
```

as you can see the commands themselves are quite small.

Hopefully by now you will be quite familiar with Protext and confident enough to use it to its full potential. Unfortunately we don't have enough space to provide you with all the features Protext has to offer, but you will certainly have enough to be able to use Protext confidently.

Arnor, the company who produce Protext have now released v5.5 which has several new and improved features. You can contact them on 0733 68909.

Command Line commands

Access (ACC) Acc <filename>
Access is used to change a file back to read-write status after it has been protected

Copy <sourcename> (destination)
This will copy the document called demo from the internal drive to the external one.

Count (CT)
This command will count the number of words in your document.

Dir (DR:)
Dir performs a directory listing of the specified directory so if you only typed dr it would just list the current directory.

Erase (del)
Erase or del deletes the specified file from the specified directory.

Find (F) Find <string><options>
Find will search for a string of text in a document.

Format (FT)
This command will re-format the entire document according to the margins, rulers, tabs and stored commands within the document.

Goto (G) G (option)<number>
Goto moves the editing cursor to the specified line, column or page in the text. The number should be prefixed by the letter P for page, L for line or C for column.

Help (h) or F1
Help is used to display a list of the subheadings in which the commands are grouped. The subheading required may be selected and then the relevant help will be displayed.

Load (L) L <filename>
When using the load command you don't have to name the directory to load from if you are loading the document from the current directory,

But if you wish to load a file from a different directory then you must specify where the file is ie L df1:demo.

Merge (M) M <filename>
This is similar to load but whereas load clears any existing text from memory and then loads the file in, Merge inserts the new file into the existing text at the current cursor position.

Note that care should be taken to make sure the cursor is in the correct position before trying to merge two files.

Name (N) N <filename>
Name renames the current file you are working on to the name you have specified.

Print (P) P (num)
Print prints out the current document you are working on, you can specify how many copies you require be inserting the number of copies after the letter P.

Protect (prot) Prot <filename>
Protect turns files into "read-only" files. Files which are protected cannot be over-written by saving or copying a file of the same name. To un-protect a file you will need to use the Access command.

Quit (Q)
This command quits you out of Protext. If you still have a document open, Protext it will warn you to save the document first.

Replace (RB) Replace <find-string><replace-string>
Replace searches for certain words which you want replacing and then replaces them with the words you want instead.

Save (S) S <filename>
Save saves the current file under the name you have given it, if you try to save without giving the current file a name then Protext will prompt you for one. You can also tell Protext where to save your document ie S df1:demo.

Spell (SC) S <filename>
Spell checks the named file. If no filename is given the current text is checked.

Pump up your Protext!

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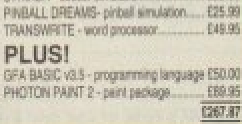
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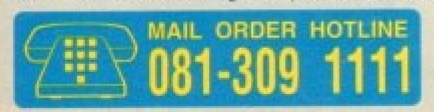
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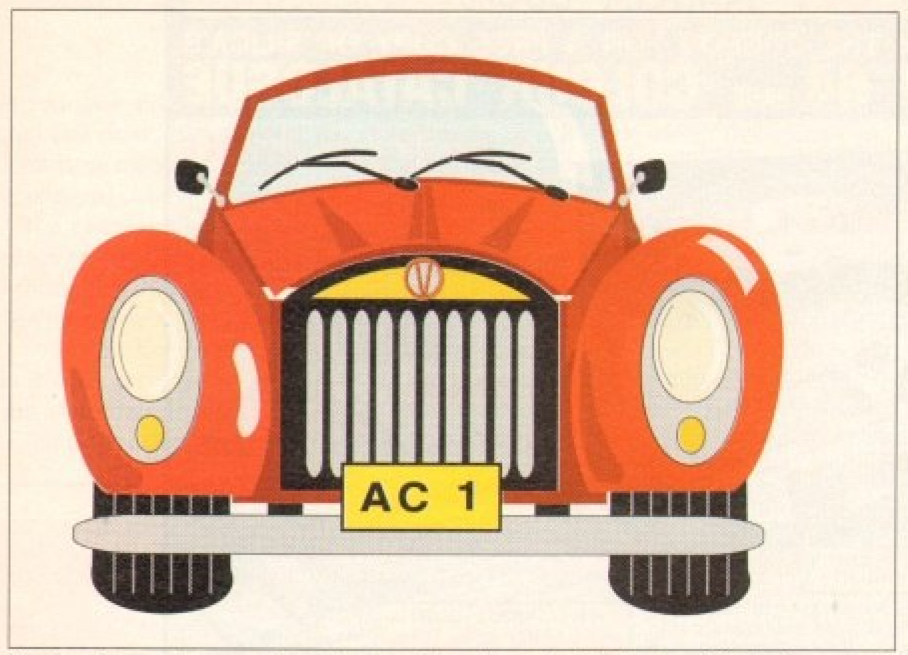
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The three images above were drawn by yours truly and saved as EPS files for printing in the magazine, ample testament to AE's ease of use and quality output



A job to which most microcomputers have always been put is that of illustration, and whether it be in the form of bitmap pictures, scanned images, or CAD, adding a little artwork has for long been one of the primary uses for the Amiga.

As the years have passed, packages designed with Amiga art in mind have expanded their range of capabilities, doubled or tripled in sophistication, and leaped forward in power.

The unfortunate spin-off from all this development has been that some packages have become decidedly over-produced and have lost the ease of use which is supposed to characterise any modern micro, never mind the Amiga.

SoftLogik's Art Expression reverses this trend by offering what is one of the most intuitive and comfortable interfaces I've yet seen in a drawing package.

When using computer calculations to describe a curve rather than penning it with a sweeping freehand stroke, or trying desperately to add originality to an obviously computer-generated design, the quality of the user interface is of prime importance.

Let an art program get in the way of the artist or draughtsman once too often and, regardless of the package's power, it becomes a liability and an obstacle to the creative process rather than an aid.

Art Expression utilises an interface which will be immediately familiar to any user of PageStream, SoftLogik's flagship DTP package, and as a result the learning curve for those people will be smooth and easy.

For first-time artists or those converting from other packages, however, the process shouldn't be much more painful.

Short-cuts

In common with PageStream, Art Expression offers the user a selection of keyboard short-cuts of the kind you can suss out without reference to the manual.

For example, when rotating an object, the temptation would be to press the r key just in case this is the rotation short-cut. Hey presto, it works, as does g for group, m for merge, b for blend, and so on.

Additional standard short-cuts such as Amiga-A to select all objects, and Amiga-V to paste down the clipboard contents lend the whole program an easy-going, friendly air which invites the user to get down to the real work of designing graphics rather than struggling with the interface. It is an approach which continues when the work begins.

On kicking up, Art Expression (AE) sports the same page layout as its DTP stablemate with rulers top and left and a floating tool box to the right.

The term "floating", for those who haven't encountered it before, means the tools can be moved to any part of the screen, making left-hand use of the mouse easier, or enabling the tools to be hidden behind the main editing screen.

The tool icons themselves are well designed and, unlike the weird and wonderful icons used by some DTP and art packages, immediately suggest their functions. There are as many tools as needed and no more, SoftLogik's programmers having resisted the temptation to stuff the screen with a confusing plethora of icons in an attempt to make the package look more sophisticated than it is.

AE's menus follow the same simple and elegant rules by keeping text, object, and effects menus separate. As one would expect, some of the menus can be lengthy, but at no point is the user presented with the huge and unwieldy lists of options to which so many software houses succumb.

The logical grouping of features and functions makes AE's menu system easy for the first time user to navigate, though given the program's superb keyboard short-cuts it is unlikely that practised users will need much menu access.

Having gushed enthusiastically so far, it's fair to remind the reader that all the thought and attention to design which has so obviously gone into the user interface would serve AE little if the drawing tools available were not up to scratch. Fortunately, the program offers real power to the artist.

By concentrating on the basics and offering complete control over shape and colour, AE gives the artist the tools with which to create effects and original touches rather than supply the original touches in a prepackaged form. An example of this is the process whereby vignettes (gradual fades of one colour to white or another colour) are created.

Rather than supply a vignette requester, with control over start colour, finishing colour, and so on, AE follows a similar approach to Adobe Illustrator in that it forces the user to build everything from simple objects.

To create a vignette, the user must therefore start with, say, a thin rectangle coloured blue and another coloured red, then blend them over as many steps as

Macro omission

When there are some jobs which demand to be done over and over again in daily use, such as scaling an object to 50 per cent size, or aligning something centrally with a second object, a keyboard short-cut would be ideal.

However, programmers can't cater for all tastes, so most will include some sort of macro capability by which the user can create a macro to do what he or she wishes, and attach it to a function key for use at any time.

Disappointingly, AE has no macro facility, not even the write-it-yourself ARexx type favoured by some companies. Ideally, an auto-recording macro generator would have given the package an extra few points in the ease-of-use stakes, but the designers have decided to leave them out altogether, despite the fact that the program's biggest rival, ProDraw 3.0, has 300 ARexx commands and a set of ready made Genie macros.



Transform is just one of AE's powerful tools

A few of the impressive text effects on offer

easels

Stevie Kennedy dons his smock and floppy hat, oils his palette, and puts brush to canvas with Art Expression, the latest Amiga drawing package

required to make a smooth vignette (about 100), merge the resulting objects, and apply the vignette to the text or object for which it was designed.

To use this to make text with a vignette (or gradient) fill, the user must create a "mask" by typing some white text and merging it with a black object, thus punching text-shaped holes in the object through which the background vignette can be seen.

Once positioned correctly, the mask has a fill colour of white assigned it and is merged with the vignette object to give the impression of text with, say, a red to yellow fill colour on a white background.

Sounds complicated, doesn't it? The approach, whereby the program attempts to make things easy without making them simple appears at first to be a matter of sloppy programming. Why not supply a simple way to create vignettes or text with unusual fills?

The answer is that there are countless uses to which an art package may be put, and had the programmers attempted to supply specific tools for even a few of these, the interface would quickly have become cluttered and unusable.

Rather than tread this path, SoftLogik have followed the example of most professional illustrator packages by supplying the basic tools in their most usable form and leaving the rest up to the user's imagination and talent.

In effect, there is very little which the user will not be able to do with AE, but some of the more geometric effects, such as text on a curve, and forcing text or objects into other shapes, are provided because to recreate these tools manually would be extremely difficult and time-consuming.

Text on a curve is achievable by simply typing the required text, drawing a curve, selecting both objects, then choosing the appropriate menu item.

A requester offers several alternatives, such as left, right, and centre justified on the curve, space to fit, and scale to fit, then the text is quickly and unfussily placed on-screen.

Likewise, forcing text into a selected shape, such as a triangle or circle, or forcing one shape to conform to another, can produce good effects quickly.

Basic object control, however, is the program's main strength, and the range and depth of the tools on offer makes the creation process a lot easier. All the usual tools are there, including lock/unlock, align, duplicate, and so on, but many more have been added to the standard recipe.

Rather than offer just the usual send to back and bring to front combination, AE also provides send backwards and bring forward so that the user may flip objects back and forward one level at a time.

This is a very useful tool when a drawing is made up of many individual objects, such as in the example of a car I produced using the package.

Drastic

Another feature I particularly liked was the Flatten and Smooth Path effect. Using this on any object, but particularly text, the user can drastically alter its appearance. Text in the Times Roman font suddenly looks like Balloon font when smooth path is used on it, or some sort or hieroglyphic script when flatten path turns an o into a diamond.

Other uses include making some shapes, such the egg, much easier to produce, a convincing example of which can be produced by simply knocking up a triangle and smoothing it.

For sizing and placing objects, the edit co-ordinates requester allows not only precise positioning according to the chosen measurement system, but also enable the user to change the selected object's width and height to specific absolute values or scale them in percentage terms.

When a drawing contains real-life designs which have to be placed in proportion to each other, this facility comes into its own.

Transform is another simple tool which can be used to impressive effect. by enabling the user to move, rotate, and scale an object over a definable number of steps, transform can produce smooth sweeping brushes from a simple line or spiralling logos from a single word of text.

Slightly more sophisticated, but just as easy to use, is the path to path effect, which is especially useful for starbursts and flashes. By drawing a circle and a triangle, then selecting both for path to path, the user can tell AE to repeatedly place the triangle on the circle path.

The result is a more or less perfect flash. Using fewer repetitions to create gaps on the path, then filling these with longer, thinner triangles, the user can build up a starburst.

The essential feature of this sort of work is AE's powerful manipulation of basic objects. All objects can be treated as paths, rotated, merged, blended, or grouped as desired.

With such comprehensive coverage of the most important aspects of drawing, AE manages to combine flexibility with power and sophistication with ease of use.

As a drawing package, therefore, Art Expression pulls off the tricky feat of coming between the artist and the finished product while making that finished product easier and smoother to produce. This should put the package high on any budding Amiga artist's shopping list.

Full control of text includes fonts at any size, using any Adobe Type 1

Whither HotLinks?

SoftLogik was the publishing house which lead the way in Amiga dynamic data exchange when it released the HotLinks system last year and strove to have it accepted by other software publishers.

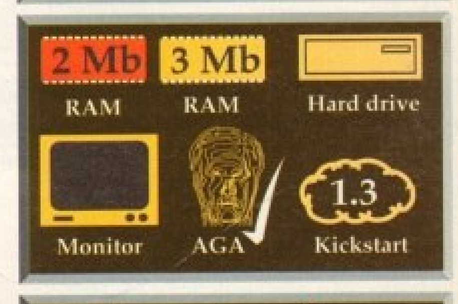
Why then, just as some have taken the standard on board, have SoftLogik released a major drawing package which doesn't support HotLinks?

The omission of HotLinks support means that there is still no way to edit structured clip art in a DDE environment other than the clumsy ProPage to ProDraw Genie function.

As Art Expression is made for illustration and DTP work, it is difficult to imagine what reason the parent company had for not ensuring it would work directly with PageStream through the HotLinks system.

BME, the HotLinks program, supplied with Art Expresssion, acts as fast and effective auto-trace add-on for use with Art Expression, but will not load and edit clip art, only bitmap graphics.

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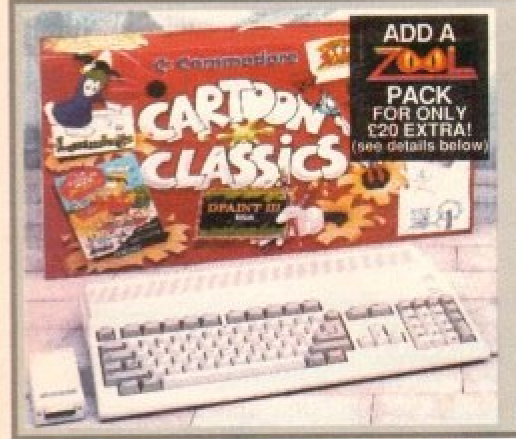
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PUBLIC SECTOR

A highly varied selection of free or very cheap software comes under the magnifying glass as Phil Morse investigates this month's bumper bundle

If an art form doesn't progress, it dies – or so a friend asserted a while back, and applying it to the public sector proves just how true an adage it is.

As half-baked cheap techno demos thin out and spinning vectors grind to a halt, so we see truly impressive animations surfacing from the computer-code quagmire, original applications replacing cut-down demonstrations.

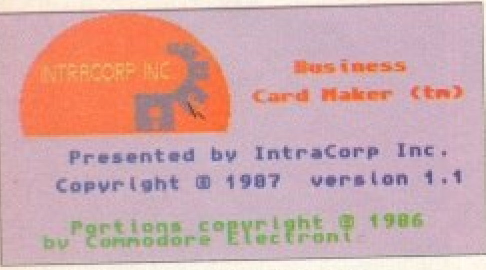
Don't get me wrong, the quality of public domain stuff hasn't rocketed overnight, but among the usual averageness are an increasing nummber of gems that positively demand to be written about. So without further ado...

Business Card Maker

Power PD, V006

Business before pleasure, so off we go with a novel application designed to help you make your own business cards. It opens with a blank "card" on the screen, and four discrete menus at the top.

First you must install printer and drive information. The program seems to be fairly old, and as such there is no support for bubblejets – an unfortunate omission, considering that they seem to offer by far the best method of printing acceptable cards on a budget, but I'm sure the industrious could get around this somehow.



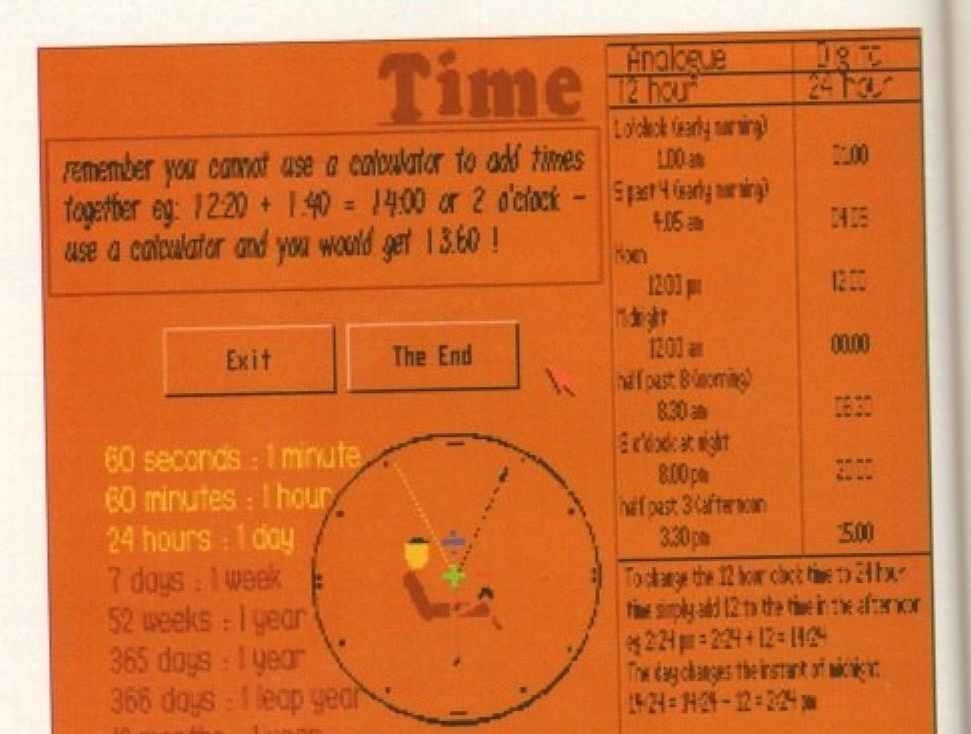
Business card are a doddle with Business Card Maker

You begin by choosing an icon for the top left-hand corner of the card – there is no choice about positioning, but you are given a wide choice of icons on disk, you can use your own, and there is an elementary but adequate built-in drawing program to help.

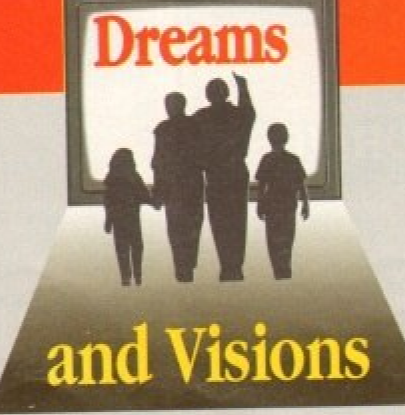
Text can be typed in using a number of fonts supplied, which although basic, cover a multitude of applications, and text once entered can be dragged into any position required, DTP-style.

Printing must be in multiples of two, as cards are printed two across the page for subsequent guillotining/scissoring, and there are draft and NLQ (near-letter quality) modes too.

It's a simple and limited package, but easy to use and well presented, and a lot of very useful business cards could be generated with the range of icons and fonts supplied.



GCSE Maths 1 is bright and informative



We open this month's anims, demos and artwork section with a trio of truly excellent animations from the talented Roddy McMillan.

Like his contemporary Schwartz, he understands fully that the best computer effects in the world are going to bore before they've even begun unless they're actually used for some purpose – in this case, a pile of silly stories lovingly acted out by some truly wonderful characters.

First up is Duncan the Dung Beetle *(Virus Free PD)*, a cartoon story documenting Duncan's attempts to eat a rather large and troublesome ball of the brown stuff.

It's very nicely animated, with some great facial expressions and over-emphasised movements matching the best that *Roadrunner* and its ilk could throw at us.

Next is my personal favourite, Lemmin's Revenge *(Virus Free PD)*. You've got to be wary of any animation which actually apologises for the number of impending disk swaps on its opening screen, and I was close to giving up at one point, but one broken disk drive eject/insert mechanism later, and you're seeing a screen of Lemmings (oops, I mean Lemmins) like you've never seen them before.

As they drop out of the hatch, thrill at the incredible cartoon animation, love the flowing locks bouncing on the Lemmins' necks as they walk, gasp as the baddie plane downs a few of them, cackle as some wicked icons are selected to wreak the ultimate revenge on a nasty aggres



He's gotta be the most lovable dung beetle in history!



Whoever said playing with computers can't bring you true love?

GCSE Maths 1

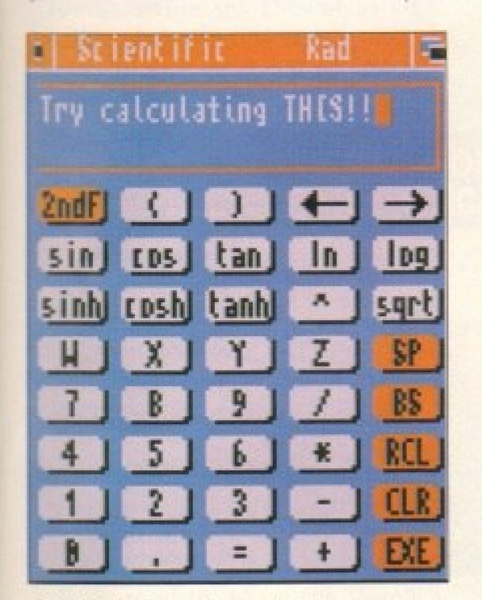
Willow PD, BU031

Written by a qualified GCSE and A-level mathematics teacher, this program adopts a multimedia-style approach (using Hyperbook, incidentally) to present its often sticky subject matter in as pupil-friendly and painless a way as possible.

The first in a planned series, Maths 1 deals with that third "R", 'rithmetic. Topics covered range from magic squares to square numbers, temperature to tables, and well-written and presented information is coupled with exercises and their answers – on different pages, of course.

It's a neat, concise, easy to use and understand, and above all an attractive program which to my mind fulfils its aims and more besides.

As a bonus, there's a calculator included which puts to shame any computer calculator I've seen so far. Apart from looking the part, it's got scientific functions a go-go, and using one of a small number of selectable menu options, it can even plot graphs, which you then have the option to print. I think you'd struggle to get it into the exam hall with you, though!



GCSE Maths 1 contains a calculator that'd put many to shame...



Biorhythms – work out if it's worth getting out of bed

Biorhythms

Power PD, V068

Not a trendy yogurt, plant food or hygiene problem, a biorhythm is actually – so it is claimed – a plottable curve based upon your date of birth which can tell you respectively the state of your physical, emotional and intellectual life.

Based upon what is actually an age-old Eastern philosophers' idea – that everything runs in circles and cycles, as opposed to the strictly linear model adopted by Western civilisations – biorhythms and their ilk (astrology, palmistry, faith healing) are currently enjoying a boom as a New Age challenges the scientific paradigms of the 20th century.

Believe in them or not, this program's gonna' plot them for you! Enter your vital statistics and the current date and hey presto!, a neat graph, which you may print if you wish, telling your where your head's at.

You can even enter important dates – such as your holidays – to see if you're going to sail through life as you sail through the Bahamas, or whether your head will be in as many bits as your supposedly finished "hotel" when you arrive at a coastal building site in Malaga...

Whether you're prepared to buy all of this is another thing else entirely, but it's a larf, if nothing else.

Disk Repair Kit

Power PD, V046

A favourite guise of PD libraries is to put a load of useful and similar programs on one disk, slap a nice menu and interface joining the lot, and put it out under a name such as... well in this case, Disk Repair Kit.

You get the ever-popular Powerpacker and the Titan Crunch archivers; Last Hope, which is a damaged file/disk recovery program; the disk back-up utility X-Copy 3; the well-used Text Engine editor; the highly useful and widely commended Utilimaster directory manager; and Fix Disk/Saddam, two virus checkers.

As far as the last items are concerned, virus checkers are of little use unless they are kept constantly updated, but allowing for this proviso, this is an essential set of tools for the serious user.

You may never use them all, but at this price, are you complaining? Just remember to avoid complacency and keep those virus checkers updated!

PageStream v2.2 demo

George Thompson Services (2 disks)

A save-disabled and printout-branded version of the respected Amiga DTP package in its latest version, this is available from a company who are also an official user group for Softlogik (the software house responsible for PageStream).

This means that they provide telephone support for users – although don't pester ➤

sor... The animation is incredible, the imagination highly inventive, and the tribute to the original a truly worthy one. And does our star kill the baddie and get the girl? 'Cause he does. An absolute essential for Lemmin(g)s and animation fans alike.

Finally from Roddy comes Knighty Knight *(Virus Free PD)* whose appalling title hides a rather atmospheric medieval demo – a revenge tale involving dragons, a princess and a brave armoured hero, called, er, Norman. Oh well.

Although not quite as original as the other two, this nevertheless is thickly tarred with the kind of quality resplendent in all of these stories – billowing smoke, tears running down faces – and the scene where Norman is looking for his armour as his trusty stead munches some grass disinterested is particularly fresh and imaginative.

How do you follow such quality? With mass destruction, that's how. Thunderbirds are Gone *(17 Bit, 2333A/B)* sees an ill-considered radio message spelling total, terminal disaster for Thunderbirds 1,2,3, and Tracy Island!

You know what's gonna' happen from the start, the coding is not particularly imaginative or original, but it made us laugh, and should you have a perverse streak too, you'll probably enjoy it as well.

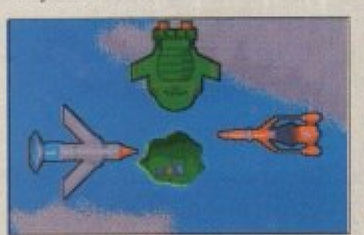


Medieval japery abounds in Knighty Knight

Monoxide *(17 Bit, 2343)* is one of the old-style "let's show off what we can do" demos (you know, "here's a 255-sided octapolyboringon spinning on two axes...") but is saved by the opening effect (interesting), the "plasma" (madcap) and the music (Belgian techno) – although all three are dated.

Finally, Carl Inc's Boat Anim *(17 Bit, 2346)* follows on from the same person's Crimbo animation featured last month, but this time the 2D kiddie's book-type static image contains a new set of moving parts, such as the couple chasing each other naked in the bedroom (ooo-er), the chimney sweeps doing his stuff (lummox!) and other innuendo-ridden and plain silly tomfoolery. If the Christmas one amused you, this will too.

And there we end this month's offerings. Send your work to me and you too could win recognition from the only column to be seen in...



Can you guess what happens next?

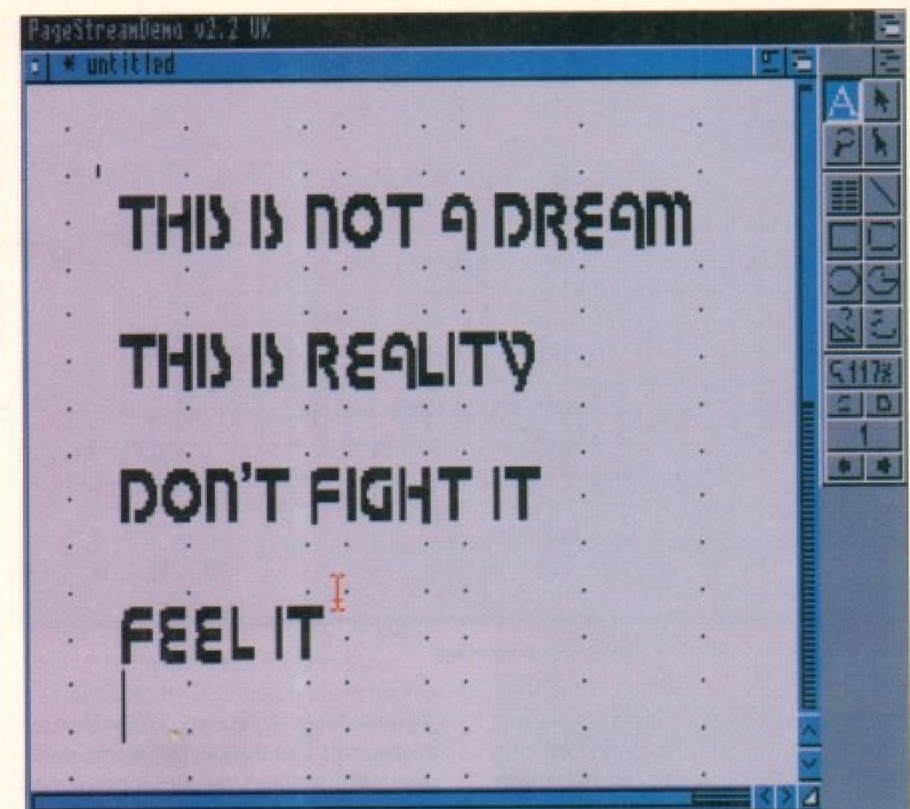


them three times a day about margin indenting if you haven't upgraded to the real package yet!

After an inordinate amount of disk swapping, you're presented with a very attractive-looking DTP package.

It offers an outstanding array of features, both textual and graphical. There's comprehensive printer support, half a dozen useful, scalable fonts, countless menu options covering all sorts of eventualities and options – in short, it's got the lot.

Play with this demo for long enough and – so someone, somewhere is gambling – you'll upgrade to the real thing. The cunning little foxes.



The sky is the limit with the power of PageStream

Hugo

Bus Stop PD (3 disks)

Opening rather disconcertingly in a Scandinavian language, the "insert disk" prompts are easy enough to translate (just as well with this number of disks!), and you'll soon find yourself selecting whether you wish to play the arcade or the TV version, and which method of control you'd prefer to use.

After Hugo spouts a load of absolutely unintelligible blurb, you enter a beautifully drawn underground mining operation, which you have to do something with involving dynamite and mining trains... I think.

See the truth is, I couldn't make head nor tail of the aim of this game, even though the supplied ReadMe assured me that it was totally self explanatory. It's definitely got something to do with working out the layout of the tunnels, but the large number of disk swaps required and the Nordic gobbledygook meant that my patience ran out before what to do had sunk in.

However, it certainly looks very nice, and the controls feel good, so if you fancy a challenge, find out what's going down in Hugo's mines... and let me know when you do!

Family History Database

Déjà Vu, L/08

Written in Amos and presented in a strangely familiar, business-like blue-and-grey colour scheme, Family History Database – I'm presuming its title is self-explanatory – is quite neatly supplied in modules.

The reason for this is to leave as much memory free for handling data as possible, and thus to prevent those for whom memory is a little tight from encountering as many memory difficulties when using it.

You actually store the information on your family and history on a separate data disk which you provide yourself, and you can display this information in a number of ways.

You can print ancestor charts (even blank ones, so all of your friends can take one home to fill in too!), male and female ancestor lines, reports on family groups... there's even a facility to allow you to search for specific surnames, should you have that large a family tree that they don't spring immediately to mind.

Should you feel a pressing need to fill yourself in on exactly where you came from, you will find FHD extremely useful.

It could even be of use to novelists or TV soap writers, to avoid inconsistencies in age-old family references in their books/TV programmes. It's another original idea, and well executed, too

Got any good PD?

If you're a library, a programmer, a dosser – I care not, for I judge people purely by the quality of the PD they send me. So why not get those Jiffy bags out, get those drives a-copying and lob the lot in the post to me, Phil Morse, at:

PD Submissions
Amiga Computing
Europa House
Adlington Park
Macclesfield
SK10 4NP

Particularly in demand at the moment (and so more likely to be reviewed) are music demos, good games and original applications, so if you've any of these you wish to publicise, you know where to send 'em. Remember, the world is listening...

Contact...

Bus Stop PD – 5 Westbourne Road, Marsh, Huddersfield HD1 4LQ
Déjà Vu - 7 Hollinbrook, Beech Hill, Wigan WN6 7SG
George Thompson Services – Cucumber Hall Farm, Cucumber Lane, Essendon AL9 6JB Tel: 0707 271117
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Virus Free PD – 31 Faringdon Road, Swindon SN1 5AR
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Public domain or shareware?

What we call the public sector can roughly be divided into two types of software – PD, or public domain, and shareware.

PD software is totally free from any copyright or charges. You simply select what you want, send off for it, and for the price of a disk plus a small charge imposed by the library to cover costs and so on, you get the program.

You can them copy it, pass it on to your friends (this is, in fact, positively encouraged) – basically, spread it around!

Conversely, if you've written anything you'd like releasing as PD, you can simply send it to the libraries and presuming they decide to put it on their books, it will be copied for all who want it.

Shareware is similar, except you are asked to pay a registration fee should you find the program useful. For this fee – rarely more than £10 and often £5 or lower – you'll more than likely get a better version of the program, information on future upgrades, a manual and/or extra stuff from the programmer.

As these programs are normally of a reasonable quality, it is in everyone's interest that you register – should you not, it's that little bit more likely that the programmer will become disillusioned and fail to produce any more programs.

So the message is simple – pay up when asked to, and the whole brilliant concept of shareware will continue to go from strength to strength!

Illegal OctaMED

Some PD libraries are still advertising OctaMED v3 when it is, in fact, a copyrighted program, making this action illegal.

Apart from v1 and the non-save v4, OctaMED is only available from Amiganuts at 169 Dale Valley Road, Southampton SO1 6QX. Anyone else offering this program is breaking the law.

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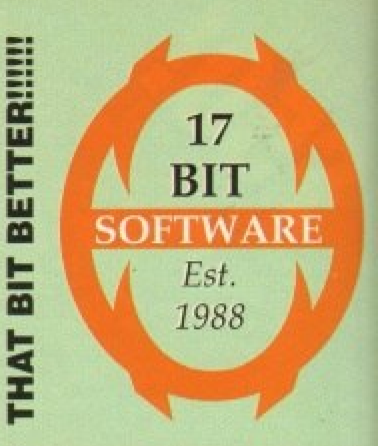
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+2299	UGH! Amiga Demo
+2298	Tearaway Thomas Demo
+2297	Shadow Slideshow
+2296(AB)	Friday 13th (1.5M)
+2295	Xmas Anim

MACART PACK

Yet another quality clipart pack, this time using images transferred from the Apple Mac. Included on the 12 disks are Xmas clipart, Viz & Comic clipart and loads of miscellaneous stuff.

Only £13.50 Inc P&P!

LISTEN TO THIS!

TEN Miracle keyboards must be won!

BLUE CHIP AWARD

MINDSCAPE

Amiga Computing editor/maestro Stevie Kennedy gave the Miracle keyboard tutor from Mindscape the coveted *Amiga Computing* Blue Chip award when he reviewed it in our January issue.

This superb hardware and software double act that teaches you how to play the piano is acclaimed as one of the most educational and enjoyable packages ever released for the Amiga.

And one will go to each of the ten readers whose correct entries are first out of the hat. To enter just fill in the form below, answer the simple question and send it to Amiga Computing Miracle Competition, Europress Direct, P O Box 2, Ellesmere Port, South Wirra L65 3EA, before March 31. Good luck all you budding pianists!

WORTH £3000

The Miracle keyboard checks every note you play and gives personalised tuition.

It starts with simple lessons and you learn quickly as you advance to a high standard. It gives quality stereo output, and you can also play it through a hi-fi.

The keyboard has 49 full-sized keys and can play 16 notes simultaneously. The package include cables, earphones, a foot pedal and manuals.

The software includes 250 lessons, a practice room, orchestra, jazz and rock and roll backing, an eight-track studio and arcade-style lessons.



ENTRY FORM

Circle the correct answers

1 How many full-sized keys does the Miracle keyboard have?
a49 **b**37 **c**46

2 How many notes can you play at once?
a5 **b**11 **c**16

Name ____________________

Address ____________________

____

Postcode ____________ Daytime telephone ____________

Entries to be in by March 31, 1993

Please tick this box if you do not wish to receive promotional material from other companies ☐

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THE CENTRE OF TEC

WTS ELECTRONICS LTD, CHAUL END LANE, LUTO

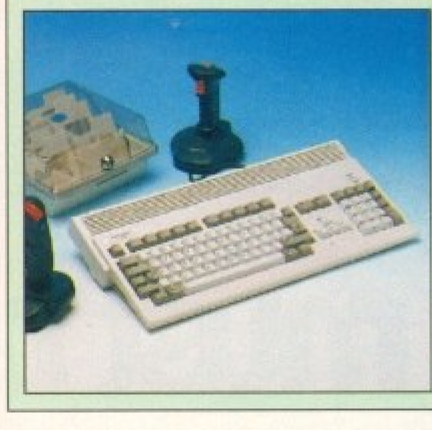


Amiga 600 Pack

- UK specification
- 1MB system RAM, mouse
- Full workbench disks, manuals & leads
- Free game included in pack
- Two Python joysticks
- 100 capacity lockable disk box **£295**

Amiga 600 HD Pack

- Plus internal 20MB hard drive **£395**
- Plus internal 60MB hard drive **£475**
- 1MB extra memory add **£29**

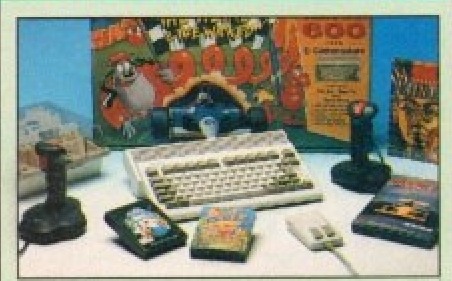


Amiga 1200 Pack

- 32-bit 68020 Full power
- Super Hi-Res graphics
- 2MB Chip memory
- PCMCIA Technology
- Alpha numerical keypad
- Two Python joysticks
- Free game
- 100 Capacity disk box

- A1200 Pack **£385**
- A1200 with 20MB hard drive **£485**
- A1200 with 60MB hard drive **£585**

Weird, Wild & Wicked A600



- Game players paradise
- Push Over game
- Formula 1 Grand Prix game
- Putty Game
- Extra free game
- Deluxe Paint III
- 2 Python joysticks
- 100 Capacity disk box

- A600 weird, wild & wicked pack **£329**
- A600 as above with 20MB HD **£429**
- A600 as above with 60MB HD **£509**

A1200/A600 Upgrades



- Easy to install upgrade kits
- Full instructions and cables where necessary
- All drives supplied with formatting instructions and software

- 20MB HD Upgrade Kit **£109**
- 60MB HD Upgrade Kit **£219**
- 120MB HD Upgrade Kit **£274**
- ProRam 1MB Memory A600 **£39**
- ProRam 2MB PCM-CIA A600/A1200 **£124**
- ProRam 4MB PCM-CIA A600/A1200 **£194**

Philips 8833 MKII Monitor



- 14" high resolution colour display
- High clarity stereo sound output
- Full RGB and composite inputs
- Free 1.5 metre long RGB cable
- Full UK warranty
- 3 Free games

- Philips 8833 MKII Monitor **£219**
- When purchased with an Amiga 600/1200 **£209**

SVGA Monitor



- 14" Super high resolution colour display
- Professional IBM compatibility
- Complete with cable
- Full UK warranty
- 2 Free games

- A1200 SVGA Monitor **£228**
- When purchased with an Amiga 1200 **£218**

Workstations



- Ergonomically sound
- Facilitates up to three external floppy drives
- Made in the UK
- Strong and robust
- Aesthetically pleasing
- Keep your desk neat and tidy
- Supplied complete and assembled with free mouse mat

- A500 Workstation **£36**
- A600 Workstation **£36**
- A1200 Workstation **£36**

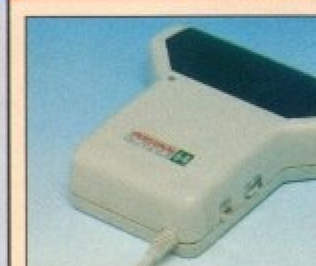
Peripherals



- 100 Capacity lockable disk box **£5.99**
- Squick mouse **£13.99**
- Mouse mat **£1.99**
- TDK high quality DSD (10) disks **£9.99**
- Computer Mall DSD (10) disks **£6.00**
- 1000 colour disk labels **£12**
- LC20 printer ribbon **£3.49**
- Jet Fighter joystick **£13.99**
- Apache joystick **£6.99**
- Python joystick **£9.99**
- Zipstick joystick **£14.99**

- Vast range of leads for many applications - **Please call**

Scanners



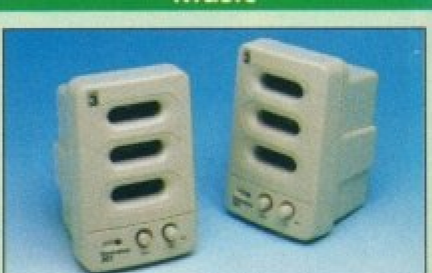
- Allows image processing in a useful and unique fashion
- Comes complete with operation manual
- One of the fastest growing applications for home and professional users
- High specification coupled with cost effective pricing

Power Hand Scanner

- 64 greyscales 100-400 DPI
- Thru'port to printer
- Fully compatible with Delux Paint 4, etc.
- Advanced software

- Power Hand Scanner v2.0 **£93**
- Power Hand Scanner v3.0 **£105**

Music



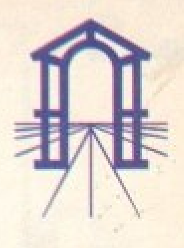
- Highest quality stereo sound sampling
- Compatible with A500, A600,A1200,A1500/2000, A3000

- Screen Beat Speaker System **£25**
(Adds amplified stereo sound to the Amiga)
- GVP Digital Sound Studio **£49**
- Megamix Master **£37**
- Stereo Master **£34**

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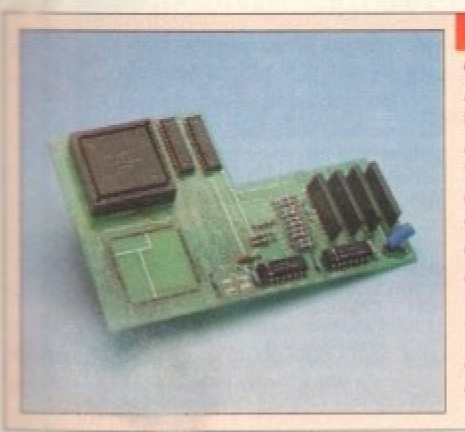
CHNICAL EXCELLENCE

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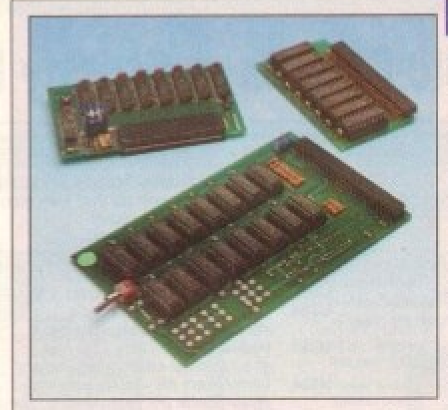




Pro Agnus 2MB

• Provides a full 2MB of Chip Memory for the Amiga 500 and A1500/2000 • Designed and built in England • Supplied with 8375 Obese Agnus • Includes 2Mb Memory on board in the form of low power Zips • Allows the processing of elaborate animation and sound sampling • Provides the same max. chipmemory as the A3000/A600 &500+ • Increases addressable memory space from 9MB to 10MB • Complete with full instructions and flying leads • British made

- Pro Agnus 2MB — £139
- Fitted — £159



Memory Expansions

A500 Pro-RAM 0.5 Meg. Upgrade

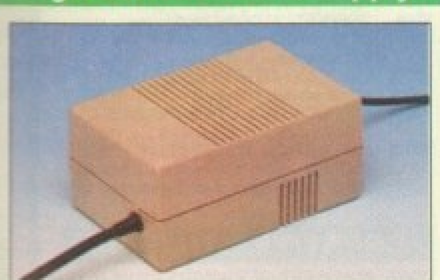
- Chip memory compatible
- British made
- Without clock — £16
- With clock — £19

A500 Pro-RAM 1.5 Meg Upgrade

- Gives a full 2MB of memory — £74

A500+ 1MB Meg Upgrade — £29.95

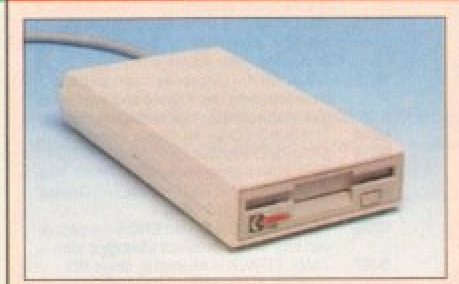
High Current Power Supply



- Allows the addition of peripherals without damage to computer or power supply
- Why risk damaging your expensive kit when one simple investment will ensure total peace of mind now and for the future
- Switch mode design
- Full crow bar projection
- A500, A500+ and A600 compatible
- British Made

- A500 Power supply unit — £44.95
- A590 Power supply unit — £44.95

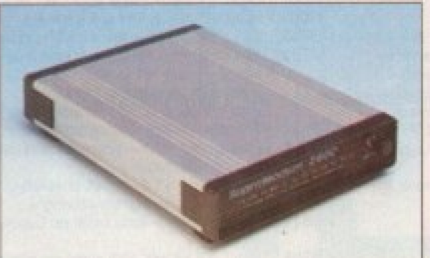
Cumana 3.5" External Drive



- High Quality
- Renowned and proven reliability
- Top notch specification
- Anti-click
- Long moulded cable
- Slimline design
- High impact plastic

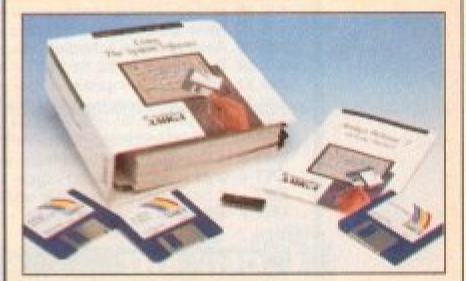
- Cumana external drive — £54
- Cumana external drive + 100 capacity disk box — £57
- Cumana external drive + 100 disk box + 20 blank disks — £63
- A500/A500+ Internal replacement disk drive — £46

Supra Modems



- Utilise hundreds of PD Bulletin Boards
- Communicate with fellow computer users
- Cuts down on telephone bills by using fast efficient baud rates
- 100% Hayes compatible
- Tone pulse, Auto Dial/Auto Answer
- Standard RS232 Interface
- Programmable number storage
- Free Coms software
- Supra 2400 — £84
- Supra 2400+ — £129
- Supra Fax Plus (0-9600 BPS) — £148
- Supra v.3.2 (Fax Modem) — £199
- Supra v.32 BIS (Fax Modem) — £358

Chips and Spares



- WTS have sole distribution rights from Americas biggest Commodore chip distributor
- Workbench 2.04 Kit (Includes manuals, disks & chip) — £78
- Kickstart 2.04 — £32
- Kickstart 1.3 — £24
- Kickstart ROM Swapper (Swap between kickstarts) — £18
- Fatter Agnus 8372 — £44
- Obese Agnus 8375 — £48
- High Res Denise — £29
- 1MB x 9 Simms — £32
- 1MB x 4 Zips — £16
- 8520 CIA — £8

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Should you wish your order to be sent by Group 4 Security service please add £5. This method is normally faster than the postal service and includes Comprehensive insurance.



WARRANTY: One year return to base (excluding chips).
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NOW ALSO AVAILABLE FROM HARGWARE IN AUSTRALIA

Keeping Public Domain at Strictly Public Domain Prices

All disks are compatible with the A500, those marked with '+' are also compatible with the A500 (+) and A600

NEW GAMES

ASI 1 Tanx, Rollerpede, Avatris +
ASI 2 Four classic games Get It! +
ASI 3 Megaball and Drip Superb +
ASI 4 Frogger and more games +
ASI 5 Raid, Go Looly and Retaliator +
ASI 6 PacMan and four more
ASI 7 Moonbase, Trix and Mightworks
ASI 8 Airace2, Hball and more +
ASI 9 Battlepong and Blizzard +
ASI 10 Escape, Pipeline and Pickout +
ASI 11 Dad, Connex, Reversi+ Trippin +
ASI 12 Llamatron, Car, Powerpong
ASI 13 Twintris + many more games
ASI 14 ChinaChallenge2 & Amiga columns +
ASI 15 Battlecars Lettrix and Mambamove!
ASI 16 Wastelands, Mission X and PacMan +
ASI 17 Tomcat, Defenda, Jetman Bugblaster +
ASI 18 Henry in Panic Skyflyer Omega race
ASI 19 Growth, FranticFreddy and more!
ASI 24 Revenge DuxCroak 3d maze +
ASI 25 Another mega collection – Buy it! +
ASI 26 SuperPacMan 92 Smash TV Ashido +
ASI 27 Addictive card games – Very good! +
ASI 28 Doody/DrMario/Invaders2/Madbomber2 +
ASI 29 DOG/Rome/Nova/B-Bal/Atax/Quadrix +
ASI 30 Bounce and Blast, Total Fire etc +
ENT + 1 Klondyke, Hball and more +
ENT + 2 Zerg BounceNbob Frogger +
ENT + 3 SpaceWars, Squamble and more +
ENT + 4 Zon Hanoi Yelp and more +

CLIP ART

- The clip art in this collection is v.high quality
- Huge bitmaps, many greater than an Amiga Hires screen.
- For use in Dpaint/DTP packages
- Each disk autoboots as a slideshow allowing you to view the entire bitmap by moving the mouse

ART01 Weddings clip art (2 disks) +
ART02 Houses – pictures of mansions (2 disks) +
ART03 Religious – full of holy clip art (3 disks) +
ART04 WW1 Aircraft (1 disks) +
ART05 Men 2 disks full of men at work +
ART06 Women 2 disks full of women! +
ART07 Kids clip art (2 disks) +
ART08 Business – office clip art (2 disks) +
ART09 Office – more of the same +
ART10 Students clip art +
ART11 Saletime – useful stuff inc. logos +
ART12 Xmas – a bit of Xmas cheer (3 disks) +
ART13 Punch – cartoons etc (3 disks) +
ART14 Animals – v.high quality pics +
ART15 Cats – 12 feline pics +
ART16 Silhouettes – 18 pics +
ART17 Schools (2 disks) +
ART18 Babies +
ART19 Sports – (2 disks) +
ART20 Olympic – more sporting stuff (2 disks) +
ART21 Medical clip art (2 disks) +
ART22 Sealife – in deep clip art +
ART23 Decorative months – pic for every month+
ART24 Wacky comedy clip art +
ART25 Holidays +
ART26 Banners (2 disks) +
ART27 Art Nouveau – floral art +
ART28 Butterflies +
ART29 Food – culinary clips (2 disks) +
ART30 Colouring Book – Colour in Dpaint +
ART31 Borders – for use in DTP (2 disks) +
ART32 Mac Clip – quality macart (2 disks) +
ART33 Hornback – scenic clip art +
ART34 Teddy Bears (2 disks) +
ART35 Vanity Fair – fashion clips (2 disks) +
ART36 Halloween clip art +
ART37 Showtime – dancing,singing etc +
ART38 Vegetarian clip art +
ART39 Floral – 14 pics +
ART40 Mythical – stars and zodiacs +
ART41 Dog woodcuts +
ART42 Cat woodcuts +
ART43 African woodcuts – more animals +
ART44 American woodcuts +
ART45 Arctic woodcuts +
ART46 Farm woodcuts +
ART47 Mixed animal woodcuts +
ART48 Birds woodcuts +
ART49 More animals +
ART50 Animal lineart +
ART51 Botanical line art +
ART52 Family Scenes (2 disks) +
ART53 Golf humour (2 disks) +
ART54 Space and transport +
ART55 Softscene2 – rural clip art +
ART56 Sports 3 +
ART57 Navy – lots of navy type pics +
ART58 Travel (2 disks) +
ART59 Border and alphabet clips +
ART60 Accents and flashes+

We now have FRED FISH 1-750

LATEST UTILITIES

75 p

U307 The Final Frontier Vol 3 (4 disks), latest edition of this brilliant Star Trek mag +
UU027 Filofax – reminds you of important appointments +
UU028 Bible (4 disks) The complete King James Bible
UU029 Tarot II read your own stars
U384 Cyclops v1.0 – art creation package – create plasmas etc +
U527 Professional D-Copy v3.0 – as good as most commercial copiers
U524 IntroMakers Kit – make own intro screens with IFF pics, digitised samples, and scrolled messages +
U528 Multiplayer – claims to be the most powerful, versatile music player for the Amiga +
U517 Kefrens Font Editors/Boot Menu Maker
U325 Label Maker – make your own labels
UU030 Understanding Amos – tutorial +
U508 175 Utilities – the most on one disk
U533 Thrallbound – contains spellcheck v1.3 and Examiner v1.0 which help you to learn and tests you on foreign words. Also contains good text adventure game+
U534 The main event – calendar & alarm clock+
U531 Powerbase v3.2 – powerful and user-friendly database +
U535 Wordpower v1.3 – spell checking, crosswords, anagram solving +
U514 PC Emulator – runs most pc business software +
U385 Plus! (13 disks) – 13 disks crammed with programs info etc. Entirely for A500/A600 users +
UU032 TDH Vol 1 – Amos users magazine +
U306 Strictly PD essential collection (4 disks) packed with utilities, gaems, music creators and printer utilities +

USEFUL UTILITIES

75 p

UU001 A-GRAPH – Very easy to use – make bar + line graphs + pie charts. +
UU002 CLI TUTORIAL – Learn all about the CLI. Given 70% rating in this magazine. +
UU003 MESSYSID V2 – Reads and writes P.C. disks.Given magazine rating of 95%. +
UU004 POOLS PREDICTOR – Increase your chances of becoming a millionaire. +
UU005 DISK OPTIMISER – Brilliantly simple! Any disk loads up to 15 times faster. Mag rating of 93%. +
UU006 A 500 PLUS EMULATOR – Emulate the Amiga Plus on your 1.3 Amiga. (IMG Req).
UU007 FREECOPY V1.1 – Removes password protection to allow copying. +
UU008 CURSOR V1.0 – Compiler for Amiga Basic programmes. +
UU009 BROWSER II – An alternative to SID. Some may find it easier and better. +
UU010 PC TASK V1.04 – Powerful multi tasking P.C.emulator, supports CGA graphics, MS DOS floppies and even your hard drive. +
UU011 NIB V2.0 – Removes protection and copies. Very powerful. +
UU012 GATORS GRAPHIC GALLERY – Examples and step by step tutorials on how to create professional logos like ones found in demos. +
UU013 FISH TANK SIM – Simulates an aquarium. +
UU014 ANALTICALE SPREAD (2 DISKS) – This is the best spreadsheet program to date on the Amiga. +
UU015 AMIGA PUNT PROGRAM – Predict which horse will win from past form. +
UU016 JR COMM V1.02 – Latest version of this useful modem program. +
UU017 BEATRIX POTTER CLIP-ART – An excellent collection of clip art for any DTP program or D-Paint. +
UU018 PLOTTING AND GRAPHICS (2 DISKS) – Contains a full featured plotting prog, and a computer aided drafting prog. +
UU019 DB – A database with up to 50 fields, max of about 1.2 million records. +
UU020 HOME MANAGER – A great all in one address book with an inventory database + to do list. +
UU021 ASTRO PRO ASTROLOGY – The best astrology program on the Amiga by far. +
UU022 MULTI DOS V1.12 – After installation your Amiga drives can read 1MB disks. +
U0024 TEXT PLUS V4.0(E) – Latest update of this excellent word processor program. Now compatible with TeX the professional type-setting prog. Found in the Fish Collection. +
U0025 AMOS LESSON I – Find out how to get the most out of AMOS. Had good review. +
U0026 EDWORD 2.2 – Best text editor around. +
U0027 MEGACOLOUR V1.0 – A program which transforms a b/w screen into full colour +

We now have T-BAG 1–61

GAMES & EDUCATION

N001 TOTAL CONCEPTS (2 DISKS) – Story books about astronomy and dinosaurs. +
N002 AMERICAN FOOTBALL COACH – Play therole of an American Football coach +
N003 BATTLEMENTS – Similar to Hunchback on the Spectrum and C64. +
N004 OTHELLO – The best P.D. version of this classic board game.+
N005 CRAZY SUE – The best PD platform
N006 SUPERLEAGUE MANAGER – Football management game.+
N007 METRO – Mini sim city. +
N008 SMASH TV THE RIP OFF – Great stuff.+
N009 HENRY IN PANIC – Jet set Willy clone. +
N010 MISTER + MISSIS – Amusing and cute platform/arcade adventure +
N011 DUNGEONS OF AVALON – Compares to likes of Dungeon Master. Stunning graphics and atmospheric sound effects. +
N012 CALORIEBASE – Received 89% in CU Amiga. Keep a daily database of your calorie intake. Usefulfor dieters +
N013 BACK TALK – Discusses common lower back problems, the causes and treatments given. Uses detailed pics/anims +
N014 TRAINING LOG – for fitness training +
N015 SPANISH,FRENCH,GERMAN,SPANISH TUTORS –4 great tutors +
N016 A VISIT TO THE RED PLANET – Guided tour of Mars, fascinating +
G396 FORMULA ONE CHALLENGE – 4 people can play in this excellent strategy match +
G397 TANK ATTACK – Attempt to storm HQ avoiding enemy tanks – good shoot em up +
G398 TOP SECRET – great text adventur e with cute graphics, given 100% in mag review +
G399 TOMCAT– fly your F15 against enemy planes, ships and gun towers +
G400 FIGHTER PILOT – superb WW1 game +
G380 CARD,BOARD & ARCADE GAME – 13 great games on one disk +
G381 PD PUZZLES – inc. puzzle + puzzle maker

DEMOS & MUSIC

D480 FRACTALE – excellent history of fractals
D483 ALACATRAZ ODYSSEY (4 disks) – probably the year's best demo
D487 WWF Pics – the clearest hi-res pics I've seen
D499 RAUNCHY SLIDES – pics of pretty girls
D507 SCHWARZTOONS (3 disks) – packed! with superb cartoon demos by Eric Schwarz
D130 SAM FOX SLIDESHOW
D129 MARIA WHITTAKER SLIDESHOW
D470 KATHY LLOYD SLIDESHOW
D316 MARIA WHITTAKER ANIMATION
D170 GIRLS OF SPORTS ILLUSTRATED
D500 DIGITAL DAMSELS
M374 HARDCORE III –pumping rave music and graphics
M376 TECHNOMANIA 91 – wire this into you hi-fi excellent
M378 NEW WAVE – slip on your slip ons and boogie down
M405 EXPRESSIONS 3 – 3 tracks with 27 minutes worth of brilliant house/rave music
M365 ALCATRAZ – more than music, highly original music and demos
M352 CHART TECHNO 1 – 25 minutes of altern-8 remixes
M356 BANGING RAVES – the 2nd coming, 11 bands in this great remix
M359 SUPERSYNTHS VOL 1&2 (1MB) – great graphics and music

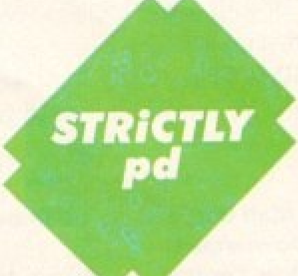
Blank disks...
12 in own box... £7.50, 50... £22.50
100... £40.00, Mouse mats... £2.99 each

VIDEO PRODUCTION

V001 DESK TOP VIDEO PACK – Collection for video producers, including Rolling Credits, Slideshow,Video Backgrounds, Special Effects, Pattern Generator and more!!! +
V002 S-MOVIE – Smooth scrolling video titler. +
V003 Turbotitler – Add subtitles to your videos. +
V004 TV & VIDEO GRAPHICS (8 DISKS) – Packed with background screens for your video productions +
V005 VIDEO PRODUCTION (2 DISKS) – Packed with video & Glenlock utilities. +
V006 VIDEO SCREENS 1 – Background pictures for video production. +
V007 VIDEO & ANIM: VIDEO DB – Keeps track of your video tape collection. RTAP lets you run large Anims on small MEM machines +
V008 IMAGE LAB – Like a mini art dept. Tools on tap does fades, colour bars & grey bars. +
V009 VIDEO: STILSTORE – Used to create over the shoulder Graphic inserts like the 9 O'Clock news. +
V0010 SHADES & FADES ANIMFADER – A utility to fade screens in and out +
V0011 ANDROIDS BACK VIDEO GROUNDS – Selection of B/G pictures. +
V0012 HARLEQUIN VIDEO ART & FONT DISKS (3 DISKS) – After its reviews in Cu Amiga shot to No.1 in sales chart. Excellent. +

CREATIVE UTILITIES

CR001 AMIGAVENTURE & ADVSYS – Make your own text games with these progs.+
CR002 PRINT STUDIO – Excellent for printing pictures or text. +
CR003 ANIMATION STUDIO – A brilliant Anim creator for you to make your own amimations. +
CR004 VERTEX MODELLING – Allows you to create 3D objects without using the X, Y & Z views. Loads sculpt 3D/4D & Turbo Silver. +
CR005 MODELLING OBJECTS – Contains over 20 vector objects in image format. Perfect for use with CR004. +
CR006 MAGNETIC PAGES V 1.30. – Create your own disk magazine. Received 10/10 in review by Amiga shopper mag. +
CR007 STRATA V1.0 – Landscape generator which allows printing of them from any angle any position & any magnification. +
CR008 AMOSBROT V1.1 (A) – This update has even more factal types which include Logistic Equation, Coast Lines & Trees – received good reviews. +
CR009 GRAPHIC PRODUCTION – Utilities collection inc scenery V1.0, Landscape, Landbuild V3.2, Cloud 9, Genesis demo. +
U241 FONTS/LOGOS – For use with D-Paint. +
U237 PROFESSIONAL DEMO MAKER – Create your own demo masterpieces. +
U299 SLIDESHOW MAKER – Shows how to present slideshows in different ways. +
U084 SPEECH TOY – Get your Amiga talking. +
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Excellence excelled?

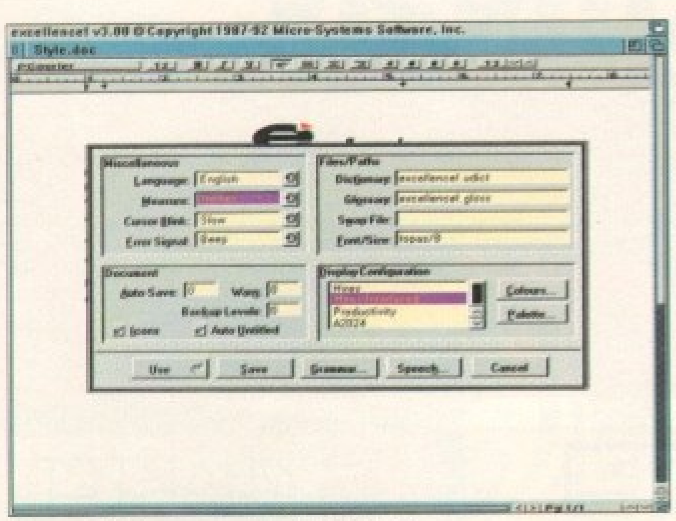
Ben Pointer looks at the latest release of a wordprocessor which appears to offer unrivalled value for money

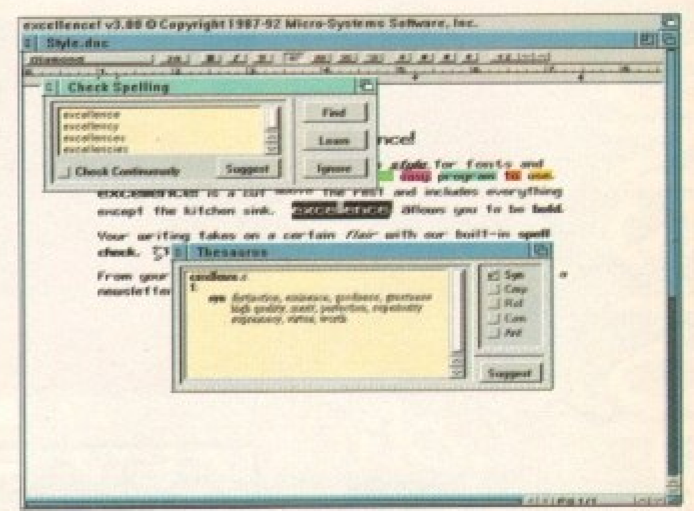
Almost all the top Amiga wordprocessors have been upgraded recently, and Micro-Systems Software has decided that excellence! shouldn't be left behind.

A fair number of new features have been added to v3.00, the most noticeable being a more modern-looking user interface, and support for 16 colour screens and Agfa Compugraphic fonts.

The new version comes on three disks. None of these is a Workbench disk, so you are required to boot from your own copy of Workbench. No special setting up is needed apart from installing the few supplied fonts on to your boot (Workbench) disk, achieved by double clicking an InstallFonts icon, and this is only necessary if you intend to use a PostScript printer.

So it's boot from Workbench, in with the excellence! disk, double click its icon, and after a short delay while the program loads, you are presented with a pleasant looking screen with an open document ready for you to type into.


The screen display can now be up to 16 colours, and Productivity mode is supported


The spelling checker and thesaurus are the UK versions, and both can be active at the same time

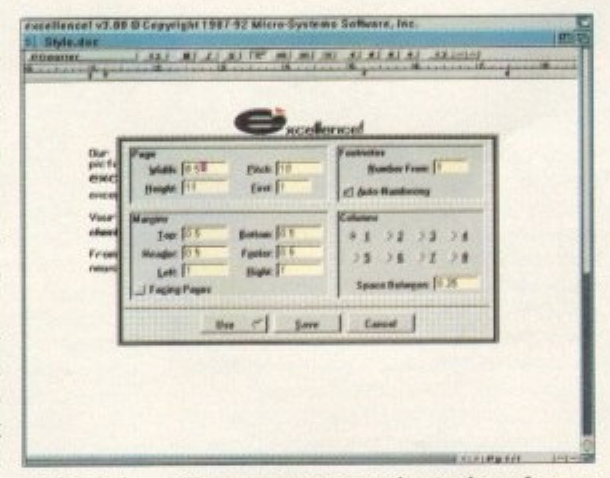
Preferences

Initially the program loads on an eight-colour hi-res screen, but this can be altered from the Preferences requester. You have the choice of 2, 4, 8 or 16 colours; a Display Configuration section lets you choose screen modes from hi-res, hi-res interlaced, Productivity or A2024. Screen colours can be changed to suit, including the colours used for window borders and details.

Changes made in Preferences and then Saved are not recognised unless all documents are closed when you make the changes, or until you quit and restart the program. Only one set of preferences can be saved, and the settings in this file are used on startup.

For its screen display excellence! uses standard Amiga bitmap fonts. Workbench 2 and 3 users are able to select any font in any size, because those versions of the Amiga operating system are able to rescale fonts "on the fly", but Workbench 1.3 users are restricted to only those sizes actually on disk in the FONTS: directory.

The Compugraphic typefaces supplied with Workbench 2 and 3 can also be used, and PostScript printer owners are provided with Courier, Helvetica, Times and Symbol screen fonts that will utilise the fonts of the same name in their printers.


The are no preset page sizes to choose from, so if you want A5 you need to know the paper size in inches or centimetres.

If your PostScript printer has more fonts than this and you want to use them, then the manual suggests you use the screen fonts from the Professional Page DTP package. Bit of a cop-out there!

Any IFF-ILBM graphic up to Extra-HalfBrite mode can be loaded. All graphics are remapped to the palette and the number of colours in which excellence! is currently working, which results is some psychedelic-looking pictures if the colours in the graphic are very different from excellence!'s palette.

Although the program reads the graphic's palette, it cannot adjust its own palette to something closer to the colours in the original picture, it simply picks the closest colours in its existing palette.

You can fiddle with colours until the cows come home, but at the end of the day you are only going to get good results if the palettes of the graphics you import match excellence!'s palette.

And although the colour scheme gets saved with the document, if you alter excellence!'s palette and import a document that has a different colour scheme, the colours in that document will get remapped to the new excellence! palette. More psychedelia. The saving grace is the price. Even with the colour and printing frustrations, at under £40 it has to be a bargain.

It may not be good enough for high quality output work, but for bashing out words or for preparing documents that are going to be printed using just the one printer font (plus italics, bold, underline, of course), excellence! is certainly competent and less than half the price of rival packages. AC

Printing posers

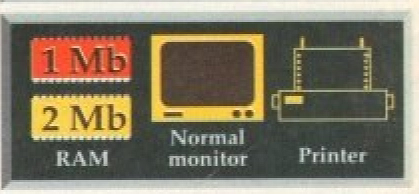
excellence!'s output using Amiga bitmap fonts and its graphics printing mode is poor. No attempt is made to increase the output resolution of these low resolution screen fonts, and even the scalable Compugraphic typefaces are output as they look on-screen – jaggy, instead of being printed smoothly as these high quality outline fonts should.

The resident fonts in printers can be used, but only one per document by means of the Font Number gadget in the Print requester, and only then if the printer driver supports this fonts number feature. How do you tell? The manual suggests selecting different font numbers and seeing what happens. Gee thanks, MSS.

This simply is not good enough. You'll want to select printer fonts on-screen; you'll want to use this printer font for headings, that printer font for the main text, and another printer font for indented paragraphs.

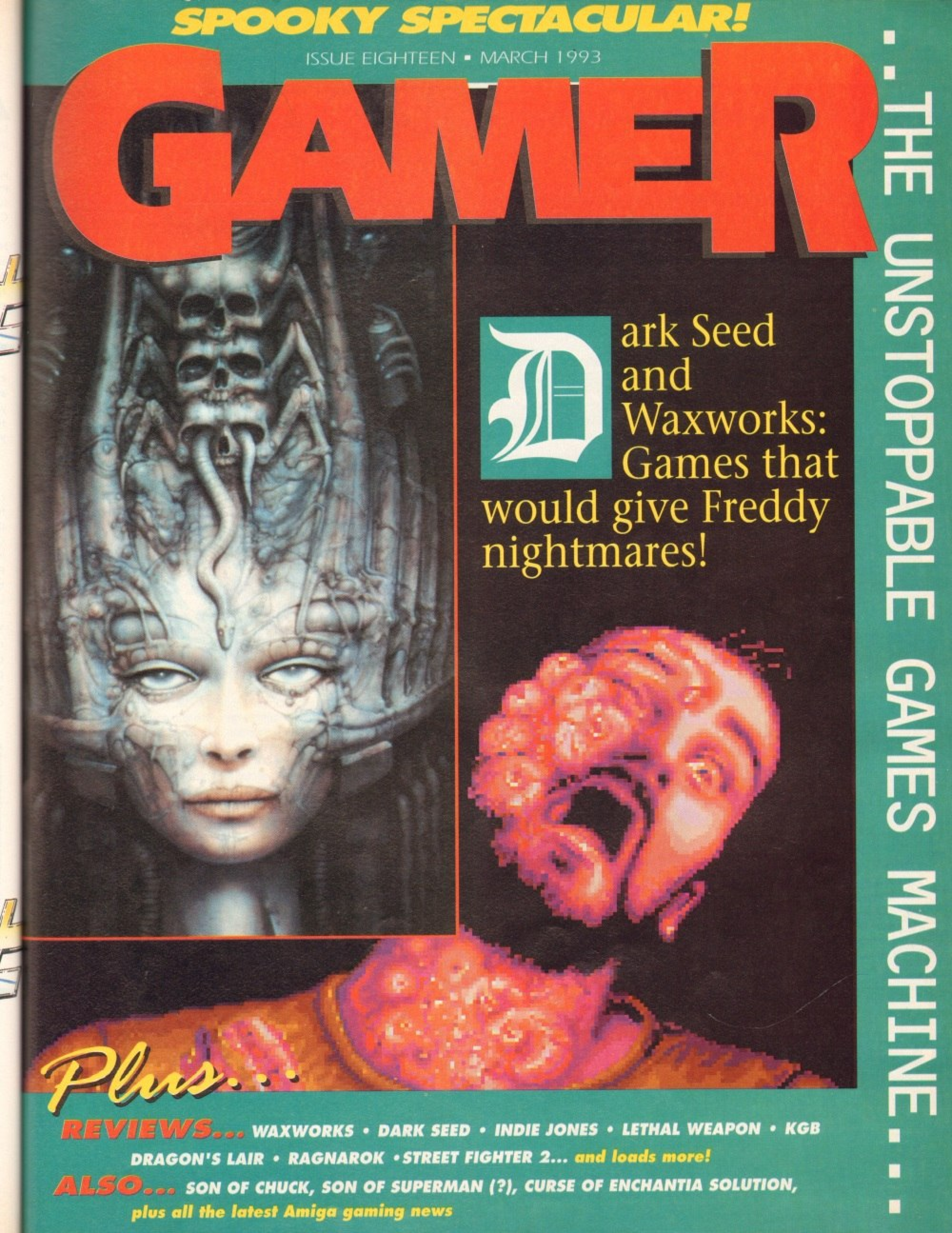
Can you do it? Not in excellence! you can't.








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MUSIC
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SAMPLE: A sound that has been loaded into a computer and is represented by numbers (digital) rather than noises (analogue).
SAMPLER: Usually a small cartridge that allows you to take sounds from a microphone (with amplification), tape, CD etc and record (digitize) them into your computers memory. Once in the memory a sample (sound) can be changed using the sampling software.
SAMPLING SOFTWARE: Allows you to alter sounds that have been digitized by the SAMPLER. Normal functions with sampling software include loading and saving a sample disk, altering the sample by cutting, speeding up/down, fading in/out, joining to other samples and much much more.
SEQUENCER: Allows you to take samples and play them back in an order (sequence) that you determine. For example if you sampled a piano note, a sequencer would allow you to play that note back at different pitches and in a sequence you decide. Your one note loaded into a sequencer can become a complete piece of piano music.
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ALSO... SON OF CHUCK, SON OF SUPERMAN (?), CURSE OF ENCHANTIA SOLUTION,
plus all the latest Amiga gaming news



What a hippy diddly crazy world

The bitch is back!

Those darn clever people down at Acclaim Entertainment are just putting the finishing touches to Alien 3. The game is an accurate conversion of the top-selling Sega Megadrive version and should be available in February.

It is loosely based on the hit movie of the same name and features Sigourney Weaver as Ellen Ripley. Ripley, our alien-bashing heroine, has crash landed on a mining planet and penal colony, Florina 161. Not only does she have to face wave upon wave of aliens and rescue the prisoners, she has to do it without any hair.

The plot does differ from the film. The first point is that in the game there are hundreds of aliens compared to just the one in the film (well two if you count the one in Ripley's belly).

The second is that in the film there were no proper weapons, whereas in the game Ripley is tooled up to the max with flame-throwers, guns, grenades and err, a bottle of Mr Muscle for wiping up those embarrassing blood stains. I've already played a one-level demo and it's looking absolutely brilliant.



The atmosphere is dark and moody and very scary indeed. Alien 3 the game is very violent, but hey those nasty aliens deserve everything they get, right kids?

Alien fans like myself will love it – the game packs all the atmosphere and excitement of the films into one little disk – what a bargain. It will cost you a mere £29.99 and as mentioned before will be available in February.



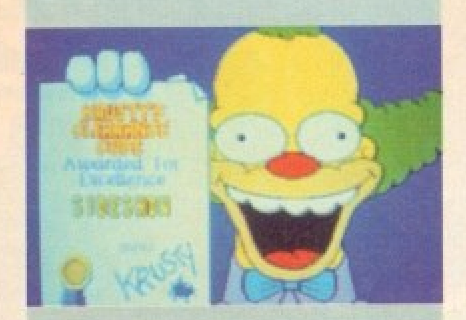
Dogs on strings

Not only are Acclaim releasing Alien 3, but they are also releasing another Sega Megadrive conversion. The game is question is the highly popular puzzler Krusty's Super Fun House.

Bart Simpson's favourite hero, Krusty the Clown, is in big trouble. Rats have invaded his fun house. Krusty must guide the rats into the rat traps controlled by Homer and Bart and you can then happily watch them burst like balloons or be killed by 20,000 volts of electricity.

Not only must Krusty deal with the rats, he must also fend off slimy snakes, pink flying pigs and laser firing aliens. Dunno, I think thé games programmers must have been taking dodgy substances.

Krusty's Super Fun House is available in February for £29.99. Aye Carumba.



Guppy love!

Hey fish fans, hold on to your, err fins because Millennium are releasing James Pond 3 – Operation Starfish. Formally entitled Splash Gordon, James Pond 3 features our fishy chum once more as he battles against the evil Dr Maybe.

The dastardly Doc has set up base on the moon, which is made out of cheese. A team of rats is mining the cheese which will be sent to Earth to flood the market and throw it into financial chaos. Dr Maybe will then rule the world! Sounds like a job for James Pond.

The actual James Pond character has had a bit of a makeover and he is now more versatile than ever before. Pond can now pick up items, run, jump and duck. The games programmer Chris Sorrell says that James is as least as fast as Sonic the Hedgehog.

In the first game James could blow bubbles, then he could stretch and hang from the ceiling and now he can stick to almost anything thanks to a pair of gravity boots.

This game looks like it could become a firm favourite with the games-buying public. The graphics looks really amazing and no doubt there'll be a wealth of playability to go along with them.

James Pond 3 – Operation Starfish will be available at Easter. I'd, err, plaice your orders for it now. Sorry, bad joke, but I couldn't resist it.

Ocean do a lot of work for charidee

Yep, lots of work for charidee, but this time they're going to talk about it. Ocean's next release is a game called Sleepwalker and it's been especially written for the forthcoming Comic Relief event, Red Nose Day 4.

Sleepwalker is a scrolling platform game done in a kind of Lemmings stylee. You play a cute dog who has the job of protecting a little night-shirt-wearing kid from danger as he wanders uncontrollably through level upon level.

The game has some wonderful backdrops, smooth parallax scrolling and is very slick indeed. The big bonus is that funny man Lenny Henry, who also does a lot for charidee, is kindly providing the sound effects. Should be stonker, or was that last time around?

It's funny, playable, addictive and the best part is that from each copy sold there is a fiver going straight to Comic Relief. The game will come complete with a handy sponsorship form so that you can make some more dosh for the charity. Sponsored Sleepwalking – sounds great!

Ocean are also organising a national challenge for Red Nose Day itself, which incidentally is on Friday March 12, 1993.

So, get your moth-eaten wallets out, buy Sleepwalker and do your bit for charidee, and then you won't have to talk about it.



Don't have a cow, man

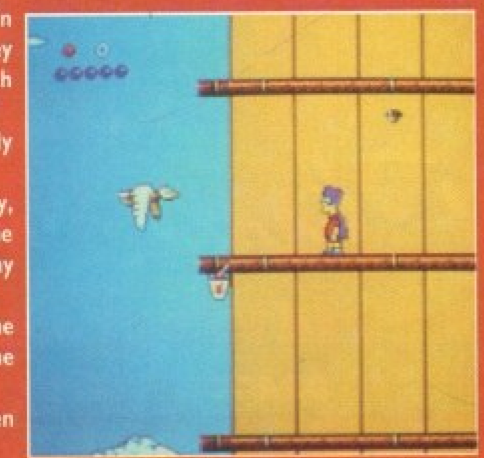
Aren't Acclaim Entertainment busy people? They're also releasing Bart vs The World in February for £29.99. The yellow-skinned one takes himself and his family on a journey around the globe. Watch as Lisa, Marge, Homer and Bart go on a mind boggling search for treasures.

Sounds a bit easy, doesn't it? But wait! Trouble is afoot because some extremely ruthless people are out to destroy them.

Will Bart and his family survive? Well dear computer games player, it is, as they say, entirely up to you. Armed with firecracker balls (ouch!) you and Bart must save the Simpsons and to grant Bart his ultimate wish – a special guest appearance on the Itchy and Scratchy show.

Former Simpsons games haven't been up to that much, but this game could be the one that breaks the mould. It says on the press release that Bart vs The World is a one or two-player game with awesome cartoon graphics and unlimited playability.

Ahem, we shall see. Hey, you never know, they might be telling the truth! Then again...



Woody Hell

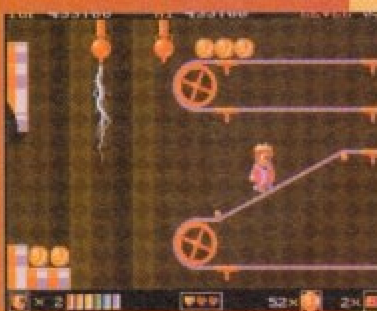
A few months ago, you may remember a game called Cybernetix which graced our beloved CoverDisk. Vision Software, the company behind that fantastic shoot-'em-up, are back with a brand new game entitled Woody's World.

Their handy press release proudly boasts that Woody's World is going to be the largest platform game ever developed for the Amiga and is going to set a new standard in game entertainment.

The game features more than 60 levels with over 20 graphic styles, background music than lasts more than one hour, masses of secret rooms and hidden bonuses and super smooth scrolling.

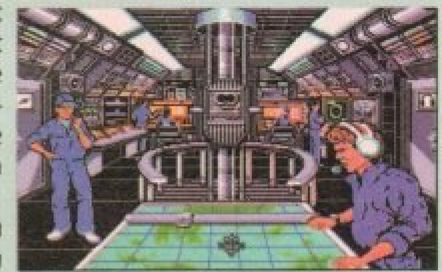
Going off their last release I think I believe them as well. The screenshots are particularly impressive. The game will be 1Mb only and is scheduled for release in March. By all accounts it could well be one of the games of the year and it's only the beginning of 1993!





Don your combat boots

The Gulf War is over, but you're still thirsting after a bit of hot war action? Well, the solution is here. Combat Classics by Empire features three great military simulations in one superb value pack.



688 Attack Sub

The three games take you over land, sea and air. You can either take control of a squadron of tanks in Team Yankee or take command of a top secret billion dollar attack sub in 688 Attack Sub. Or why not don your shades and be like Tom Cruise and fly the high-tech F15 Strike Eagle 2?

When F-15 2 was reviewed in Amiga Computing we were quoted as saying that it's "without doubt one of the best flight sims around". Features of F-15 2 include six real-world locations with each area containing hundreds of missions.

Team Yankee, a now classic tank game by all accounts, featured action and strategy side by side in a definitive simulation of modern tank warfare.

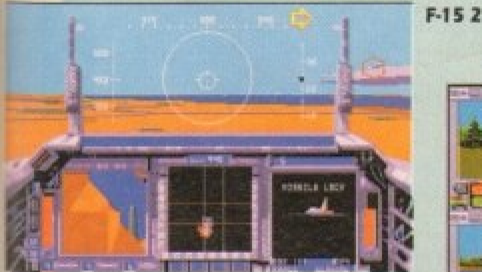
It featured five major scenarios and up to 25 battles plus superb high-definition bitmapped tank graphics.

Finally there is 688 Attack Sub where you can act out several episodes of Voyage to the Bottom of the Sea, except the crappy monsters and Kowolski, the guy who gets attacked every episode, are sadly not included.

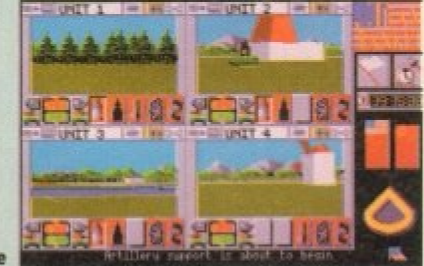
Attack Sub features ten different scenarios, digitised sounds of the submarine at work and actual digitised pictures of the crew.

If you fancy a bit of war gaming then Combat Classics could well be the compilation your sweaty little hands have been waiting to grab.

Combat Classics will only cost you £29.99, a three for one bargain, especially considering we are in a recession.



F-15 2



Team Yankee

GAMER

INNER VISION

No demo disks reviewed here...

REVIEWS

REGULARS

Floppy hats 'n' bullwhips ahoy

INDIANA JONES AND THE FATE OF ATLANTIS

US GOLD ▪ £37.99 ▪ 1 meg ▪ Mouse/keyboard/hard drive installable ▪ Out now

It's hard to imagine the atmosphere and comic strip action of the Indie films translated into the fairly slow and pedestrian confines of the graphic adventure with any success, but given that we're talking about the team responsible for Monkey Island 2, the proposition begins to seem less absurd.

Atlantis (for so shall I abbreviate the game's unfeasibly long name) is, happily, based not on a story designed for film, but written and storyboarded from the ground up by the LucasFilm boys as a computer graphic adventure.

Had the company decided to cash in on The Last Crusade, we would probably have been dealing with a tatty commercial spin-off (Yuletide domestic fowl to you and me). Atlantis is far from this, and is in fact a chompingly good game.

The plot, briefly, puts Indie at the heart of yet another Nazi scam, and this time the master race is after not a radio for talking to Gott, but nuclear power – the power of Atlantis.

Well, OK, it's not really nuclear power, it's a sort of romanticised ancient energy locked up in a strange metal called orichalcum, discovered by the Atlanteans, but the principle's the same. If Indie fails, we're all sausage-meat.

The story begins with Herr Kerner, a Nazi agent who escapes from Indie's office after a hilarious intro sequence. Indie, having been force-fed several blindingly obvious clues (just to get you started, you understand) realises that the teutonic tearaway is interested in a dig he was once in charge of in Iceland, which means Kerner will be after Indie's old female sidekick, Sophia, who was on the same dig.

Jones sets out to warn Sophia and the action begins. To begin with, Atlantis has a very similar look and feel to Monkey Island 2, with the usual bank of a dozen or so action icons to the left of the bottom half of the screen and a space to the right for whatever Indie happens to be carrying. The top half of the screen is the action window and all user input can be in the form either of mouse clicks or key presses. Easy, eh?

From the outset, Atlantis's storyline unfolds in much the same way as you'd expect. There's an initial section, after which the player has a choice of "paths" to follow (more on this later), then the scene changes to a variety of locations including Monte Carlo, North Africa, Crete, and Atlantis itself.

At all times, the player is in no doubt as to what is happening and which way the plot will go next.

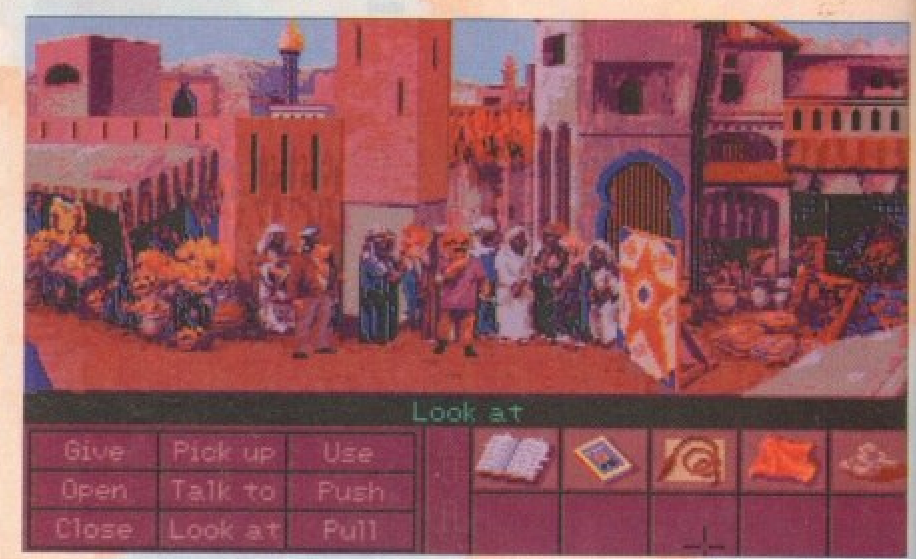
This is probably my only major complaint about Atlantis. There's no real mystery about the game, and even the movements of the enemy are reported at regular intervals through the medium of cut scenes.

In other games, there's a certain element of figuring out both what to do next and how to do it, but in Atlantis, Indie is never in any real doubt as to his aims.

The challenge is based purely around the clever solutions the player must find to the problems which litter the well signposted path. I'm not saying the game is predictable or boring, it's just that it can become a little too much like reading a puzzle book rather than a computer novel.

The puzzles themselves are very tricky in parts and should pose enough of a problem to keep most players up at night for at least a few weeks, but one in particular, at which I'm completely stuck, is very silly.

Three stone disks must be collected before the player can enter Atlantis – a worldstone, moonstone, and sunstone. When all three are used in the middle of the

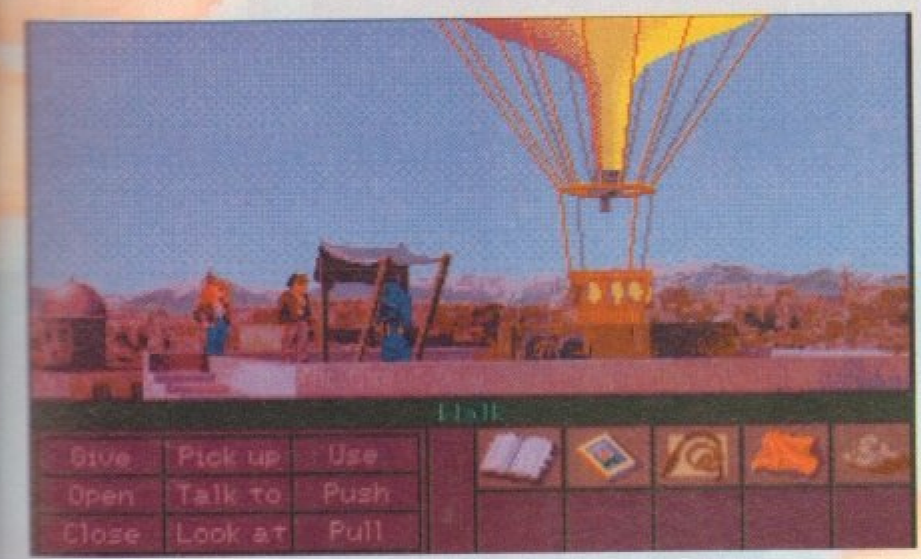


Indie intrepidly watches a sinister street performer



A rather obvious clue at the outset prods Indie in the right direction

Taxi! Take me to Atlantis! Or a burger bar, maybe!



Indie intrepidly considers a spot of gentle sightseeing



Try response three for a good kicking

map room in the caves under a certain location (don't want to give away too much, but you'll be steered toward it anyway by the plot), Indie must position them in accordance with a clue – different every time the game is played – in Plato's Lost Dialogue.

My problem is that there are dozens and dozens of combinations, and the only one I've managed to get to work after hours of messing about leads to a dead end.

The impasse, after a pretty logical and middlingly difficult set of puzzles, is irritating and off-putting, though guaranteed to lengthen the life of the game – something which is of prime concern to many graphic adventure fans these days.

The paths I mentioned earlier are the game's really innovative feature. Players complete an initial section of the game, after which it becomes clear where the plot will go, and a choice of three playing approaches must be made.

There's the wits path, where Indie carries on alone and attempts to think his way through the game, the team path, which sees Sophia tag along as a second team member, and the action path, which involves Indie in lots of punch-ups with Germans (otherwise known as the lager lout path).

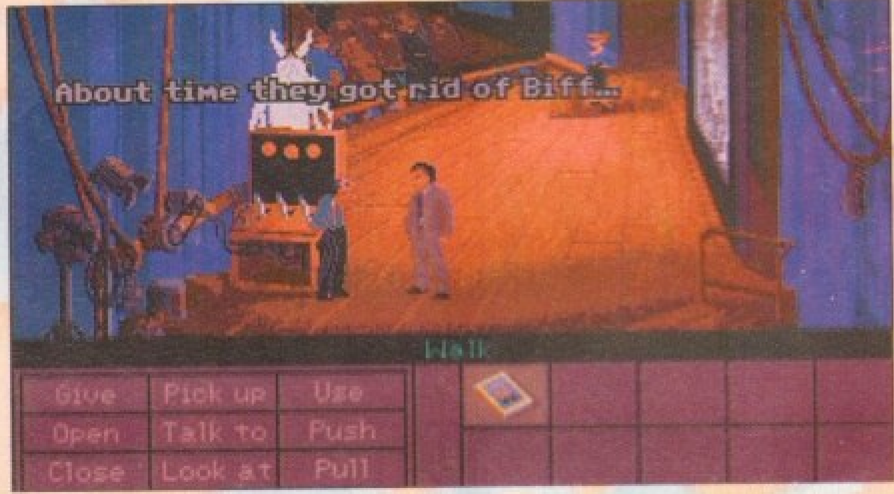
All subsequent events will depend on which path was chosen, and there really are radical differences between the three routes.

For example, on the wits path, Indie can simply walk up to M Trottier in – Monte Carlo and get a stone disk off him. On the team path, he must set up a seance with Sophia at which Indie and Sophia attempt to convince M Trottier of their credentials. This is far from easy, and the point at which I failed miserably.

In short, Atlantis is a very good graphic adventure which should contain enough puzzles for most seasoned fans, and last long enough to justify the money spent on it. With its three different solution paths, superb graphics, and touches of humour, it sets a standard at which other graphic adventures must aim.

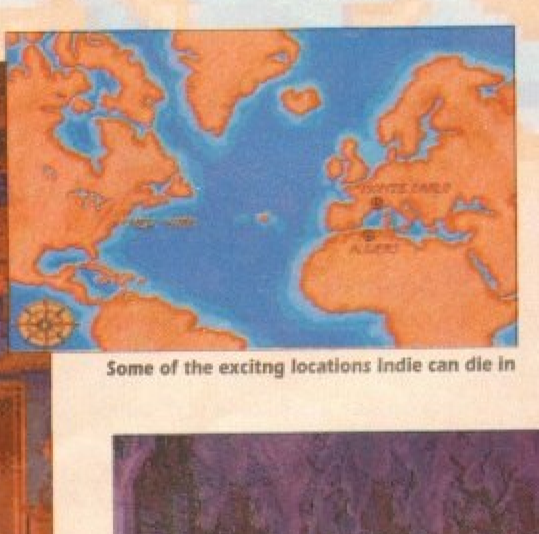
Had there been slightly more mystery and investigation as opposed to simple puzzle solving, I would have dressed the game in PJs and taken it to bed with me.

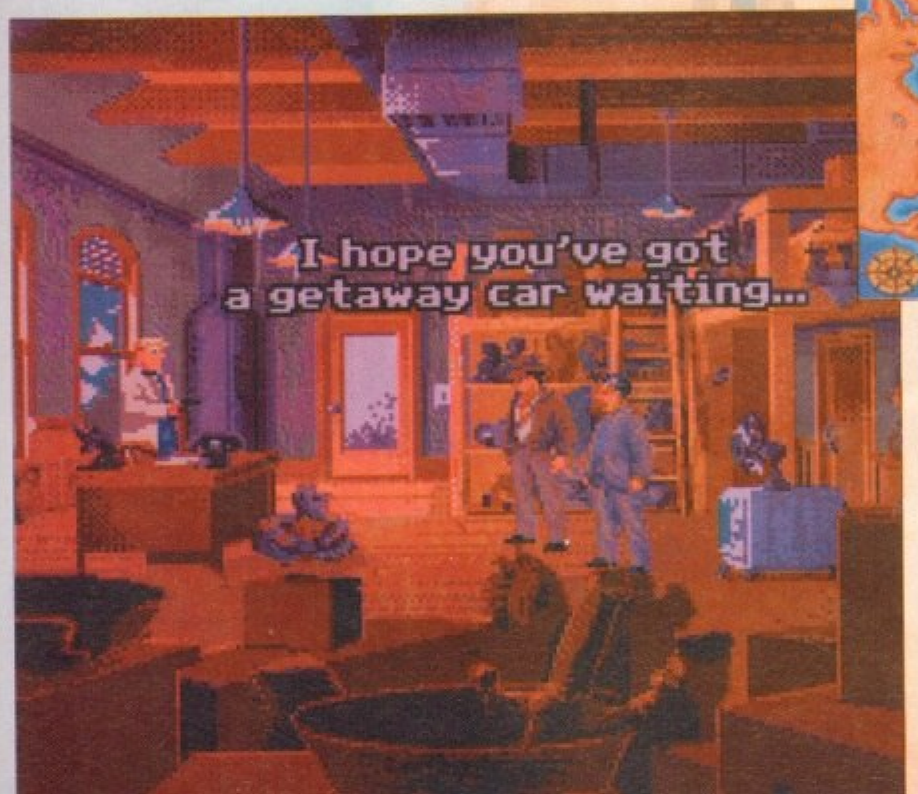
Stevie

A sentiment whch many at AC share




Some of the excitng locations Indie can die in

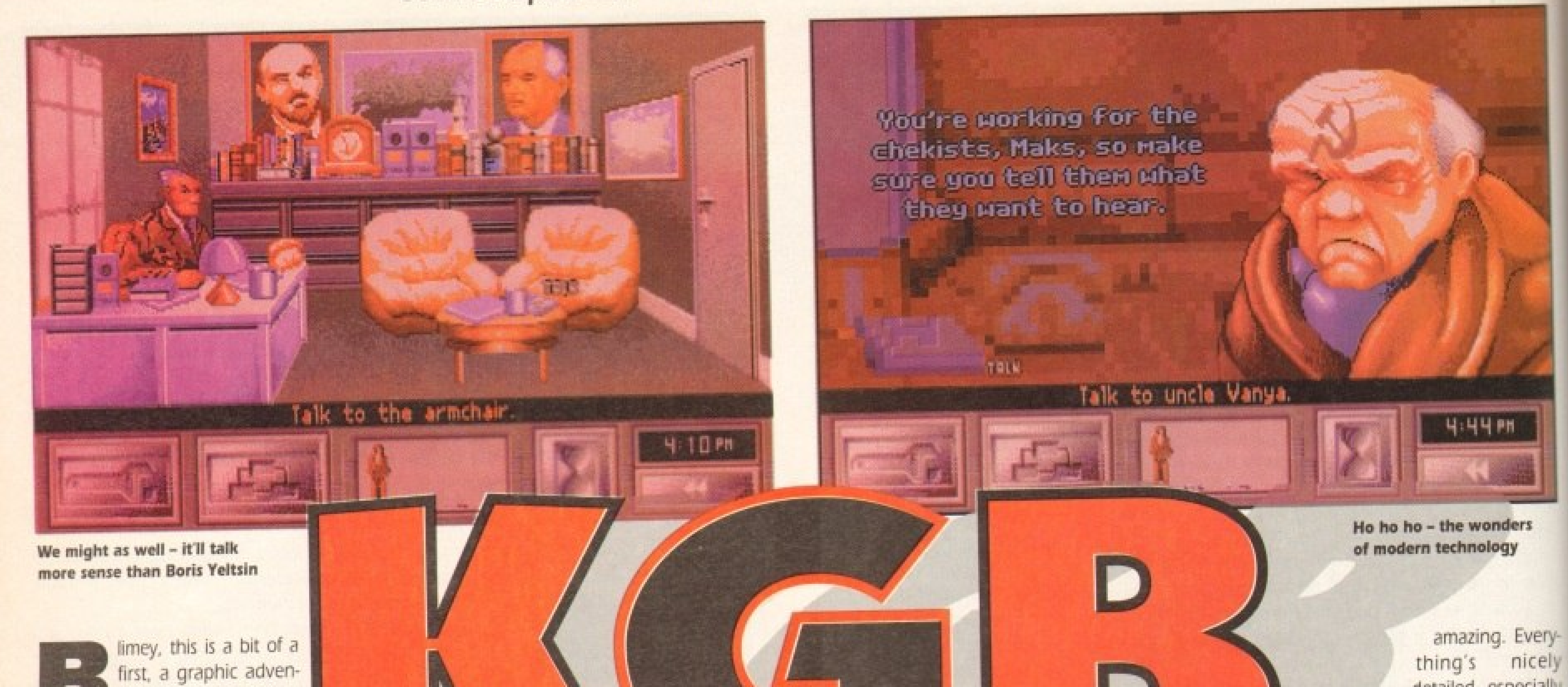


Kerner realises his plan has a fatal flaw



Surrealist detection device at work

Soviet Republics, communism and, err McDonalds... eh?



We might as well – it'll talk more sense than Boris Yeltsin

Ho ho ho – the wonders of modern technology

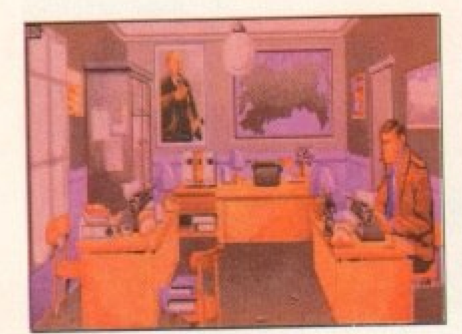
KGB

VIRGIN • £29.99 • ½ meg • Mouse • Out now

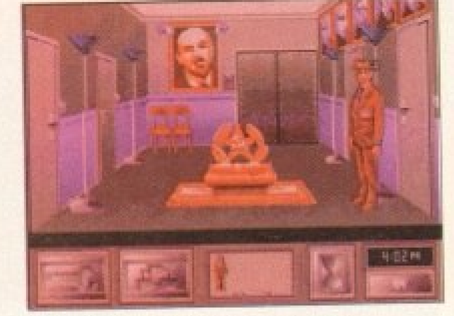
Blimey, this is a bit of a first, a graphic adventure based on the KGB. Normally, you get some dodgy adventure with wizards and goblins, but a game about the KGB, that's going to break some ground in the computer game world.

Wait a minute – isn't a game about the KGB going to be really political? Well you'd think so, but It doesn't tend to go into detail about all that boring stuff. What it's really about is kidnapping (gusp!), murder (double gusp!), drugs (hooray, erm I mean gusp!) and eventually a plot to oust President Gorbachev from power and return the country to the iron grasp hardliners.

The game takes place in Moscow and Leningrad in the days leading up to the August putsch. Pardon? You don't know what a putsch is? Well to be perfectly honest I didn't know what it was either, but look it up in a good dictionary and it means an attempt at a political revolution or a violent uprising.



I bet this guy doesn't queue up for bread



Lift attendant in commie spy scandal

So there you go, you learn something new every day.

You play the part of Maksim Rukov, a former GRU Captain who has been transferred to Department P. Department P, if you're wondering, was set up during the time of Peristroika and its function is to investigate possible cases of KGB corruption.

Your first mission in your new job is to investigate a vicious killing. Your involvement is required because the victim, a chap called Golitsin, is ex-KGB. Your superior officer Major Vovlov sends you to investigate the scene of the crime, and it is while you are at Golitsin's office that you meet and interview his sister.

It is while practising your famous D I Burnside interview technique that you discover the trail that Golitsin was following before he died.

KGB isn't an adventure like Monkey Island or Legend of Kyrandia, it's an adventure more in the style of Ween, but it's much more classy than Ween. You are given the view of a room from your eyes, but you don't see your character moving about in the room.

You do see other people in the room, though. For instance, while you are interviewing Golitsin's sister, you see her standing and when you tell her to sit, she sits on a chair.

She isn't animated, though, and it looks more like the beaming down process out of Star Trek. I'm sure you get a good enough idea of what I mean.

One wonderful thing about KGB is when you start talking to other characters. The text that you get to choose from is so funny that I couldn't stop myself giggling, but I quite regularly got stared at by other members of staff.

A sample conversation would be something like: "Have you a cigarette?", to which your colleague replies: " The unparalleled Soviet health budget is not to be squandered on treating self-inflicting diseases, comrade!".

I know it's not meant to be funny, but no-one on earth, not even the Soviets talk like that. The graphics in KGB are pretty amazing. Everything's nicely detailed, especially the screens where you are talking to suspects and superiors.

KGB is very easy to play thanks to the mouse pointer system. It's called a smart pointer, and whenever you place the pointer over an object it will automatically lock on to the best option. So if you place it over a person it switches over to the Talk option automatically.

KGB is a pretty good game and very intriguing. Lovely graphics, great playability, quite addictive – that's how I'd sum it up and by Jove I just have.

If you adventure fans are looking for a bit of entertainment to while away the winter evenings, you won't go far wrong with this.

Jonathan

VISION

Superbly drawn but with very little movement.

AUDIO

Decent intro tune, and that's your lot.

PLAYABILITY

Loads of options, some of them a little pointless.

ADDICTION

Just might find itself in the cupboard before completion.

87%

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If you're a fan of George and Lynne, then you'll love...

Cool World



Hits paardy time! Who said policemen didn't get high?



There's only one way to get rid of those hard-to-remove Doodles – it's Vortex

OCEAN ▪ £25.99 ▪ 1 meg ▪ Joystick ▪ Out now

Ocean seem loathe to develop any game that hasn't first appeared in cinematic form – Hudson Hawk, Bart vs Mutants, Terminator 2... the list goes on and on – in fact Cool World is only the first of three film licences to be released by Ocean in the coming weeks.

It isn't such a bad idea actually, this licensing business – it removes the need to come up with a plot, give it a title, and make up a few characters.

Such tiresomeness has already been taken care of by the film producers, and leaves the game team with nothing to do except write a completely stonking classic based on the hard work of others.

Should be easy. But it's not – at least, not if many of the past releases of this nature have been anything to go by. Perhaps programmers see it as an easy ride, but for whatever reason, numerous film licences – not just from Ocean I hasten to add – have turned out to be not only disappointing conversions, but plain old crap games.

Cool World is due to hit the cinemas in the early new year, and although little information has surfaced as yet, Biff tells me with a lecherous leer and through a mouthful of drool that it stars Kim Basinger.

From what we can gather, the action centres around some guy who produces a cult comic, unwittingly creating a parallel universe, thus enabling cartoon characters – Doodles – to enter the real world.

Well, all right, I read it on the box, but it's a pretty safe assumption that the game closely follows the plot of the film, so that makes it OK, doesn't it? These Doodles are characters created by Jack Deebs for his comic, and inhabit the mythical land of Cool World.

What with the parallel universe and all though, the Doodles are making the quantum leap from comic-strip immortality through to the real world, by means of spooky-looking vortexes that have cropped up all over the place.

The Doodles aren't quite as daft as they first appear though. It turns out that they don't have any wish to actually exchange their safe and easy lives in Cool World for the forbidding recession-ridden melancholic monotony that is the real world (having another bad day Paul? – Ed), but simply want to "borrow" certain items from our dimension to make their own lives more comfortable.

Nothing wrong with that. Share and share alike, I was always told. But hold on! All this parallelic universal to-ing and fro-ing is upsetting the cosmic balance. If too many items are taken from our dimension, it's not entirely out of the question that the whole world will simply explode.

Ignoring the obvious solution of asking the Doodles politely not to blag anything else, Deebs enlists the help of Harris the Policeman to counter the imbalance. You are Harris the Policeman, and this is where the game begins.

The idea is to beat the dastardly Doodles at their own game by using the same vortexes to travel through the worlds, returning purloined items to their rightful place. Beginning in the streets of Cool World, you must first collect enough coins to bribe your way through to the actual level.

You are armed only with a Handy Pen, which is used both to "shoot" the Doodles and to suck them in. For those of you who think this all sounds a bit dubious, let me explain.

The whole point of the exercise is to prevent items from finding their way into the Cool World. Obviously, the more Doodles who make the crossover, the more objects they can take.

Shooting the Doodles with your pen turns them into big inky blobs, which can then either be shot once more for extra points, or "sucked in" in a Ghostbuster-type fashion by keeping the Fire button depressed.

When shot, it's only a matter of time before the little beasts become re-animated, whereas sucking the buggers in disposes of them for good.

To complete a level you must prevent too many items making the cross-dimensional leap for a specified period of time, which shortens as you progress.

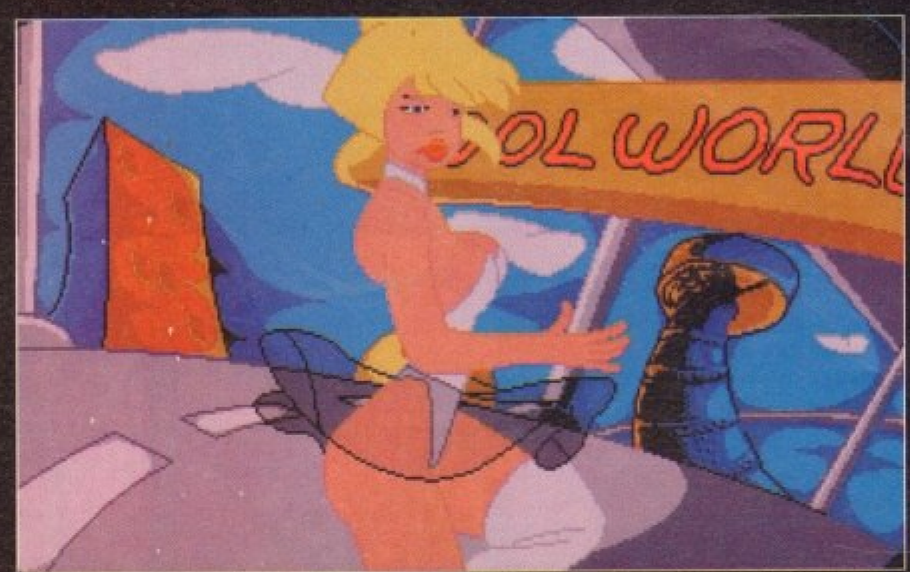
My instant reaction to Cool World was one of disappointment. After the excellent animated sequence at the beginning, the graphics – while colourful – seemed rather flat. The gameplay was rather repetitive and I quickly gave up.

On returning to the game later in the afternoon though, I became quite involved, and dare I say it, addicted to saving the universe from its impending oblivion.

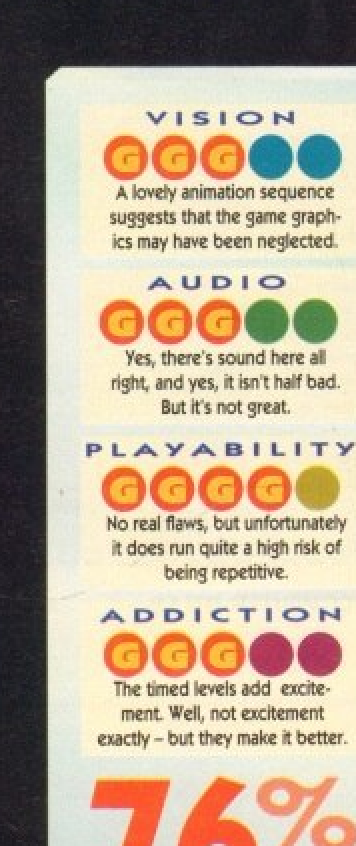
More varied levels are definitely needed if the game is to reach anything close to classic status, and beefed up graphics – especially in the confrontation department – would have made for a more compelling game.

As it is, Cool World follows in the tradition of many previous Ocean games, in that it is a competent and enjoyable arcade platform adventure – but come on Ocean, surprise us!

Paul



Was there something you wanted to get off your chest? Arf arf. Eh?



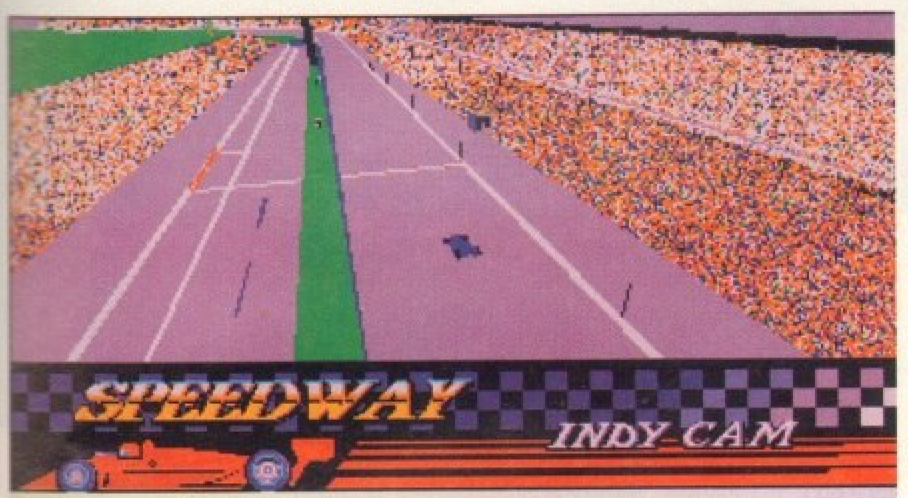
Bring along your pump bag and meet the...

SPORTS MASTERS

EMPIRE ▪ £29.99 ▪ ½ meg ▪ Keyboard/joystick/mouse ▪ Out now

Just as many struggling recording artists decide to release sad and lacklustre remixes and "best ofs" towards the end of the year in an attempt to revive their flagging careers, so too do software companies attack the market with dire compilations of ancient games that were best forgotten.

It was a welcome change then, that when Sports Masters arrived in the offices shortly before Crimbo, boasting four great titles from months and years gone by, at least three of them were just that.



Indianapolis 500

85%

A bit of a dinosaur in terms of age, Indy 500 still knocks the spots off the majority of offerings we've seen since it was originally released.

Basically the Indy 500 comprises drivers steering what appear to be customised Formula One cars around a track so elementary in design it makes Scalextric look like a map of the human nervous system.

Admittedly the cars do reach speeds of 200 mph, and the number of racers and size of the track are such that collisions are commonplace, but still...

Speed is prominent in the game too, and from your first person perspective in the cockpit of the car you can almost feel your cheeks wobble as you race distances between 25 and 500 miles (that's where the name comes from, see) using keyboard, joystick, or the preferred mouse control.

But that isn't all that's on offer – good Lord no! You can choose to compete for one of three teams, racing either in their pre-set machines or in your own car, which you can almost completely customise.

Jump straight into a race and you'll find yourself in last place in the rolling start, whereas by qualifying you can jump up the field. Spectacular crashes or posy overtaking manoeuvres can be replayed from a number of different angles.

Indianapolis 500 is a fast, furious and fun racing sim that's well worth looking into if you missed it first time around.

Advantage Tennis

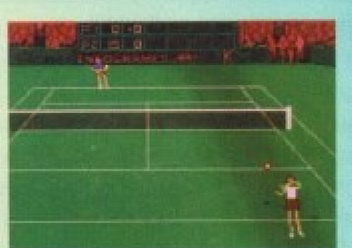
88%

Unless players themselves, very few people in this country seem interested in tennis until Wimbledon comes around, but not me. Not any more. I'm a year-round tennis fan, and it's all thanks to Infograme's excellent Advantage Tennis.

The first thing you need to do is train and adopt a strategy, and AT allows you to do just that by setting your strength (one or two-handed shots required), style of play (attacking or defensive), and specialities.

Once this is done you're ready to play, either against a human opponent or the computer. Your aim is to amass a fortune and become the world's top-ranked player by winning as many tournaments as possible during the busy season.

This is no mean feat since you begin at the very bottom of the rankings, but fear not – you can practice against the opponents of your choice and enter loads of exhibition matches before you jet off around the world with your tennis gear and tin of Raljex. Gameplay is absolutely superb – it's incredibly realistic, and fast? – oh ho, I'll say it's fast; in fact A1200 owners may find the speed a little too much. The game is very well presented, with a crisp, clear court I just can't think of a major fault – you'll be hooked in minutes.

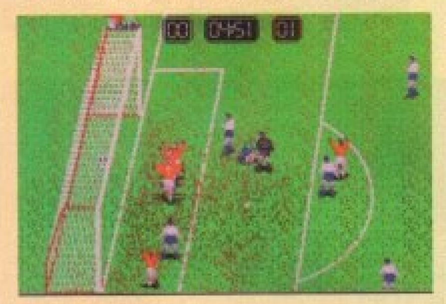


European Championship 1992

40%

Here it is – the duffer of the pack. This Tecmo coin-op conversion might have been viewed slightly more seriously about two years ago, but with two superb footy games already on the market, on a budget label or in a compilation is really where this Elite effort belongs.

It's a one or two-player game as you would expect, viewed from the touchline with little of the pitch visible at any one time, the teams being the participants in last year's Euro championships – with the noticeable exception of the eventual winners!



Playability isn't the problem – it's a very easy game to get to grips with – but the lack of options, absence of speed and poor quality graphics make for a game that is best avoided.

Overall

87%

I'm a fan of sports and as such may be slightly biased, but Sports Masters is certainly the best compilation I have come across. It offers superb value for money by anyone's standards – you'll be instantly addicted and thrilled by it for hours on end.

Paul

PGA Tour Golf

87%

Choose from four courses in this EA classsic and compete with up to three opponents in a four-round tournament against all the top US pros with the aim of achieving glory and walking away with a stonking great amount of cash.

That's the idea, but try striding onto the fairway and hitting a perfect drive straight off – ha! – fat chance.

That's why we're given the option of practising beforehand on any course, or on an individual hole, a putting green or a driving range. It's a very easy game to play, the Stroke Bar at the bottom of the screen making it very easy to play reasonably accurate shots after a bit of practice.

Viewing from behind your strokemeister, you are afforded loads of options during a game that make the whole affair a joy to play.

Graphics are great and what sound there is is very convincing. PGA Tour Golf was far and away the best game of its kind on its release, and although now showing its age just a little, it still offers much to the hack 'n' slashers among you.

DARK

Mur

CYBERDREAMS ■ £34.9



I bet they don't do that on the NHS

Well, we waited and we waited and finally after well over a year of anticipation, the adventure game that would make Monkey Island or any other of that ilk look silly and inadequate has finally hit the streets. But does it live up to its reputation?

I've really been plugging Darkseed ever since I saw the PC version which was to be quite honest a brilliant piece of programming and marketing.

Everything about the game, from the stunning packaging which included a hints and tips book to the jaw-dropping graphics, was wonderful. Obviously I was a little apprehensive when the Amiga version arrived.

The PC version was bound to be better, I thought, not through any fault of the programmers but simply because of the nature of the two machines.

Cyberdreams also had another angle on the sale of the game. To create the majority of the graphics in the Alien world section of the game they enlisted the talents one Mr H R Giger, a surrealist artist better known for the creation of the Alien for the Alien films and for such loveable beasties as the Vomit Monster in Poltergeist II.

Mr Giger created the scenes on paper and then the technical people scanned the art and incorporated them into the game.

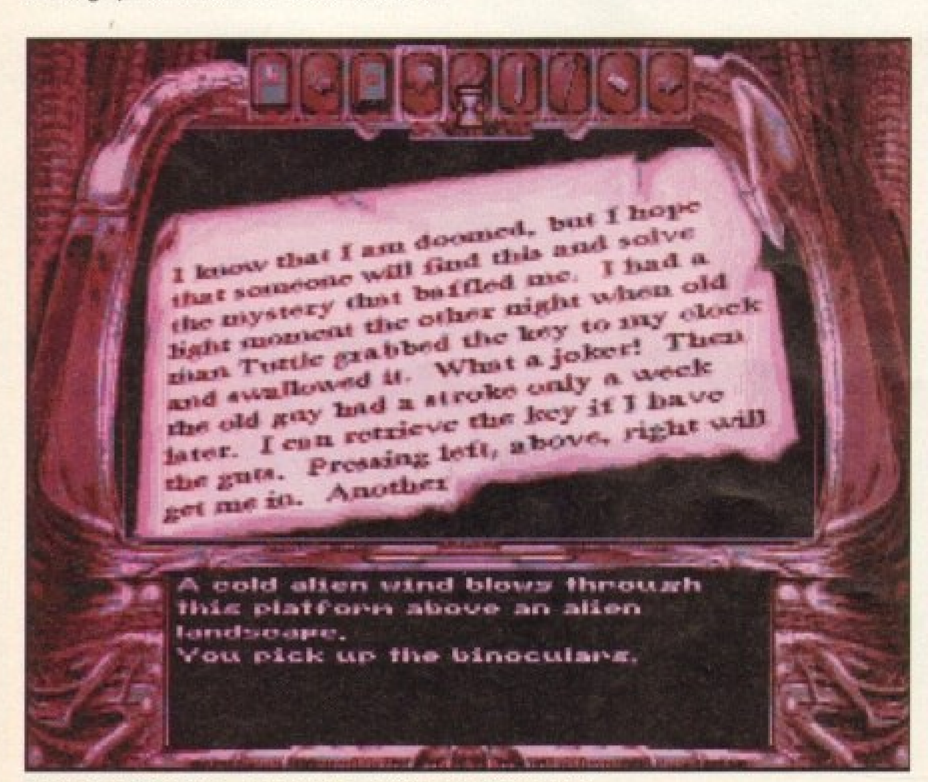
In it you play Mike Dawson, a horror writer. You got sick of the rat race lifestyle of living in the city where you were a sales executive for a multinational company, so you moved to a small town in the American south to get some peace and quite and to fulfil your lifetime's ambition of writing a book. But you wake in the morning after you first night spent in the house with an incredible headache. All through the night you were having horrible nightmares, images of half-human, half-machine animals torturing you.



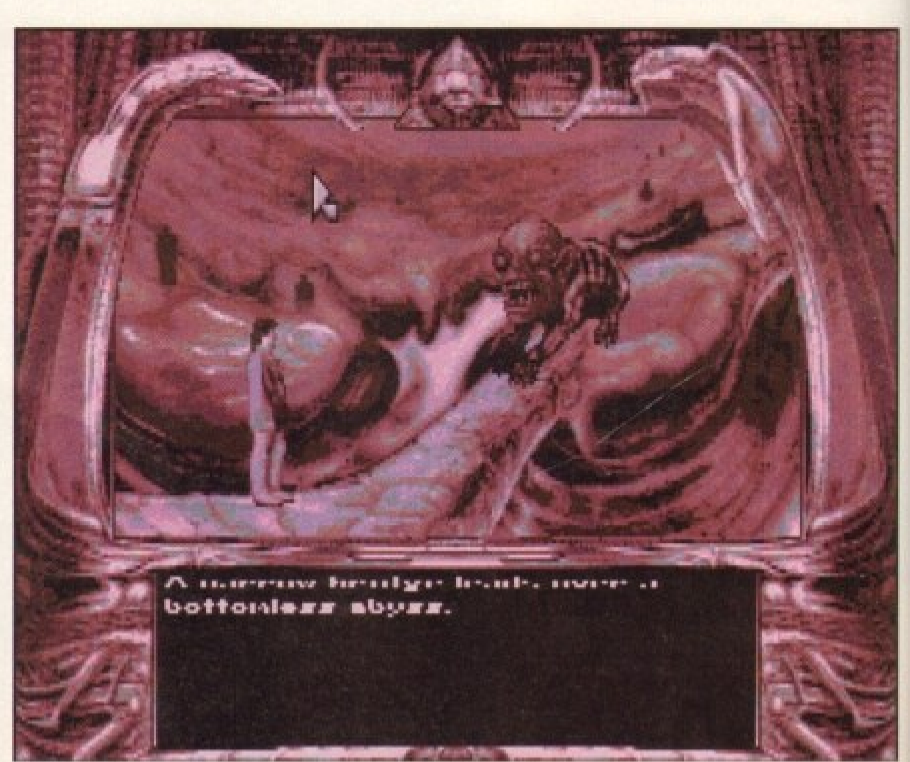
As time goes on you realise that the house is closely linked with an alien world filled with nasties that are desperate to come and conquer earth.

But they aren't going to go to all the trouble of getting into spaceships and shooting people and all that sort of stuff. They have just planted the embryo for the next generation of their race in your head. In three days

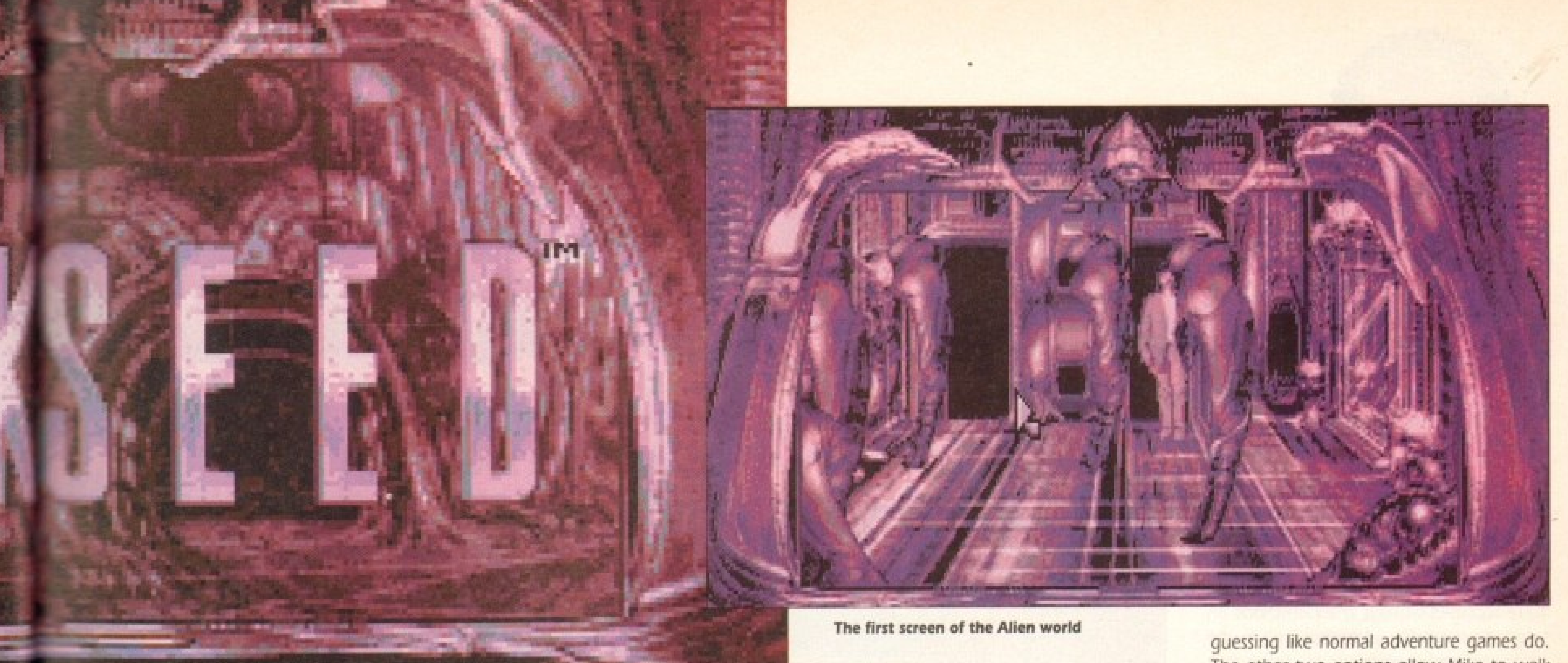
Time to get some pills to get the head straight



Barking mad that fella – thought he was being chased by aliens



Not the sort of dog you can take round the park



The first screen of the Alien world

lurk germination

34.9 1 meg • Mouse • Out now

An extensive collection of empty wine bottles. The previous owner must have had some reason to drink.

Cor look at all that beer

it will hatch and the world will be doomed to be ruled by these sick and depraved aliens, not to mention the terrible mess it will make of your head. So now I have given you all the background on the game, what is it like?

As it turns out, I was talking complete rubbish when I said that Darkseed wouldn't be as good on the Amiga as it was on the PC. In my opinion it is the most graphically impressive release for at least a year. The screen mode is constantly in hi-res interlace so the characters on-screen are crystal clear. Darkseed is also the first game ever to contain morphing techniques.

A morph is when one image is transformed into another. You have some lovely clips of a doll in a box turning, for instance, into a monster and back again.

When you first start playing Darkseed the game appears to be quite small but it does take time for you to find all the different locations – they won't jump out at you.

Not only have you got to find the locations in the normal world but eventually you'll find your way into the Alien world, which is very similar only a little bigger. There are over 70 locations.

My favourites are the game is the interactive characters. Many games claim to have interactive characters but all they do is repeat set monologues when you ask them a question.

This isn't the case in Darkseed – you have to strike up a rapport with some of the inhabitants of the town to continue to make progress. They will come to you for things and you must give them something in return if you want to get what you want.

As with any such adventure the main way of progressing is by the discovery and use of clues – there are plenty and most are logical and not too obscure.

The odd thing is that you have to find certain things that trigger events later on in the game, so there is a domino effect. It doesn't matter if you don't find some of the clues because you don't need them all but your task will be made much easier if you do.

You must remember that the game is set over three days and the way the time works is very interesting. If the machine thinks you are engaged in some activity it time will run almost in real time but if you are just killing time and have nothing to do on that day then everything will speed up.

And remember you are dealing with a real person so he has to sleep, but watch out for the nightmares...

You control Dawson by a simple point and click interface. By clicking the right mouse button you change what your icon on the screen looks like.

To use things you have a hand icon – whenever you move the cursor over anything that can be moved or operated the hand will point.

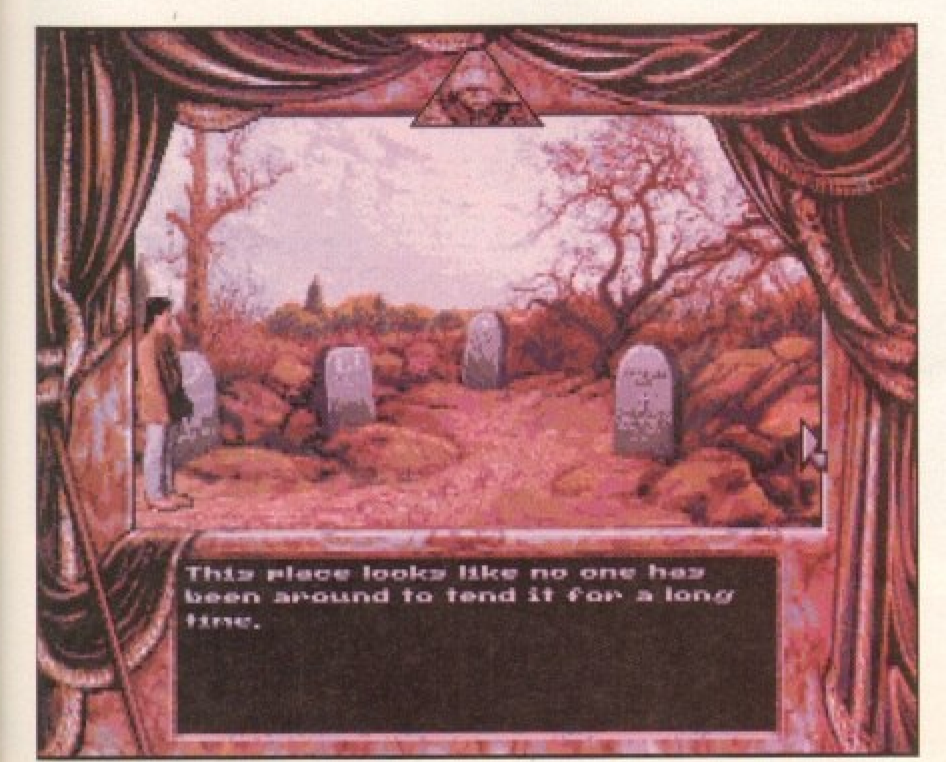
I quite liked this – it doesn't leave you guessing like normal adventure games do. The other two options allow Mike to walk around and examine things.

General laws and etiquette still apply – just because you are playing a game it doesn't mean you can turn into a slob. When you get up in the morning you have to get a shower or none of the locals will give you the time of day. And if you break the law you will get banged up for the night in the local nick.

I do have one or two beefs with Darkseed. Because the screen mode is constantly in interlace the text at the bottom of the screen can be hard to read, and you get the annoying flicker which always accompanies interlace and which gives you a headache in seconds flat.

Darkseed is one of the adventure games that I look forward to taking time over and enjoying in full – I cannot do it justice in these two pages. Check it out for yourself.

Ben



A day out with the kids, at the graveyard



Sick, sick, sick

CREATURES

THALAMUS ▪ £25.99 ▪ ½ meg ▪ Joystick ▪ Out now

Two years ago a game like this would have been banned, at least the programmer would probably have been strung up. But as times have changed so have the restrictions on what is acceptable and what isn't in the computer game world, so much so that games like this do exist.

Creatures is a puzzle game stroke platform run-around thing. You take the role of a cute and very stock little furry thing, and you must make your way through various levels dodging, shooting and collecting small creatures to make a potion with.

Once you have conquered these levels you are then faced with either a shop or a puzzle level. In the shop you are accosted by a shapely women who tries to tempt you into buying something that will make you buy a weapon of some sort on the next level.

The lateral scrolling levels instantly reminded me of Ghosts and Goblins, except Creatures is a lot harder.

Basically Creatures makes a mockery of all the fluffy bunny games released in the last year or so, namely Lemmings, Skweeks, Dizzy and platform games too numerous to mention.

You notice something is amiss on the title screen when you have two cute little fluffy things walking round the screen looking in complete harmony with themselves and their idyllic surroundings.

Then a bloody great monolith with "Creatures" carved into it comes smashing down on top of them turning them into strawberry jam.

So I started playing the game with anticipation and at first I was quite let down. It just seemed like your average puzzle game. Then I got to a later stage called Torture.



Phew, here's a picture that doesn't contain any gore...



Uh oh – can you guess what will happen next, children?



Splish, grind, splat...

The screen opened up with your character at the bottom of the screen and another character very similar to yours glued upside down to a some sort of jack.

This poor thing was slowly being jacked to another level with a very nasty monster standing on it that resembled a blue potato.

It was obvious that he was going to do something but nothing can describe just how graphic the mutilation is that occurs.

So I blundered around trying to help my little friend but to no avail. He was jacked up to the monster's level and the nastiness began. The creatures walked off the screen and came back with a chainsaw, turned it on and began to rev it up in front of the poor beastie glued to the jack.

After a couple of seconds the animal that looked like a blue potato began to rip in to the thing on the jack with merciless abandon.

Let me tell you, the programmers left out no detail. The poor thing's body vibrates as his organs are sprayed from his body. Sick, very sick indeed.

There are three other forms of mutilation in the game – you may just be able to glean what is going on from the pictures but I won't "spoil" it for you.

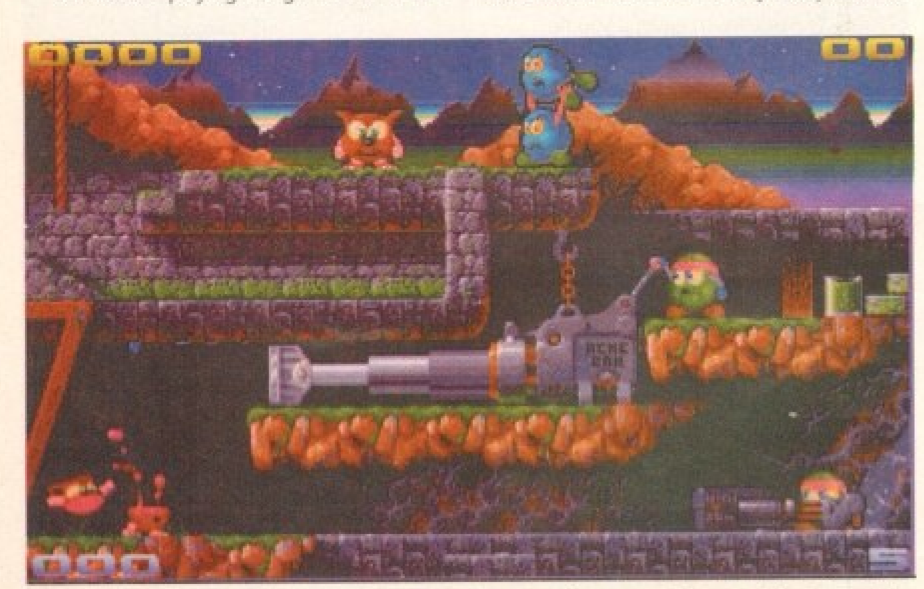
To stop this mindless mutilation you have to figure out the puzzle. It maybe involves jumping on seesaws or breaking glasses of fluid to kill the evil creatures but whatever it is, it's pretty challenging.

I think Creatures is a prime candidate for the cult game of 1993, but it's definitely aimed at and older age group than the usual fluffy bunny games.

As long as you are not easily offended by violence then I would say Creatures is a good buy. It is challenging in every aspect and the animation of the creatures is fantastic.

My only beef is that it is a little too challenging in parts, and three lives just aren't enough. Oh, and don't show your granny...

Ben



Ye-ess, that's right – and now zippy will show us how to perform a tonsilectomy without surgical instruments



VISION
GGGGG
Brilliant but sick animation.

AUDIO
GGGG
Really good, humorous FX.

PLAYABILITY
GGGG
Does get a bit tricky in places.

ADDICTION
GGGG
If your stomach can stand it you'll be at it for ages.

85%

It makes Norse sense to me

RAGNAROK

MIRAGE ▪ £34.99 ▪ 1 Meg ▪ mouse/joystick ▪ Out now

The historically aware among you will no doubt be perfectly familiar with the concept of Ragnarok – a specific time in Norse mythology whereby all the gods gathered their armies together in a fight to the death, to free the world of evil and create a better plane for mankind.

Of course I knew this too, and duly brought it to the attention of the rest of the office, who erroneously believed that Ragnarok was in fact the sequel to Chuck Rock.

Those Nordic types were a tad rough if my memories of A-level history lessons serve me correctly (he failed – Ed). No I didn't – Mr. Haworth "asked me to leave" because of my apparent lack of interest, but that's beside the point.

Anyway, we could reasonably expect a computer game depiction of such a race to involve arcadey hacking aplenty, combined with a fair old beat-'em-up element and no small measure of animal abuse.

But not a bit of it – no less than a board game is what we have here, Ragnarok is based, for those of you who've played it, on the ancient King's Table.

Odin is the king of the gods, and knows that he will die at Ragnarok. In this position I must say I'd be tempted to stay at home in my comfy palace and send some minions out to do my dirty work.

But unlike our Royal Family, Odin wishes to retain his dignity, and decides to face the problem head on, descending to earth with his customised game to pit his wits against devious humans in the hope of picking upon some pointers as to how he can cheat his destiny.

The two sides are the Blacks and the Whites – the Whites represent good, and must protect their central figure (Odin) from the evil Blacks, who need to surround him on all four sides to become victorious.

On his visit to earth, Odin entered a tavern where he found 11 men and women willing to take him on. Each differs widely in skill, and he (or rather, you) must defeat each opponent twice – once as White and once as Black – before progressing onto the subsequently better skilled competitor.

Victory in 22 consecutive matches is rewarded by a very nice animated sequence (there's also an optional one at the beginning of the game), but this kind of success doesn't come easy, and you can choose to practise as Black or White against any opponents of your choice.

Also included is a two-player mode and the original game, giving even more longevity to an already tricky game.

The options allow you to toggle the battle sequences on or off. A battle sequence takes place every time a game piece is taken, and involves the personified pieces offing each other in several bloodthirsty ways.

Chess players should derive great satisfaction from Ragnarok, but it's a very easy game to play for anyone – I've never so much as looked at a chess board sideways, but became instantly familiar with the rules, though admittedly didn't meet with a great deal of success.

Despite the battle sequences, it is worth remembering that while effectively offering two games in one package, Ragnarok is at the end of the day a computerised board game. An enjoyable and engrossing one, but a board game nonetheless.

Paul

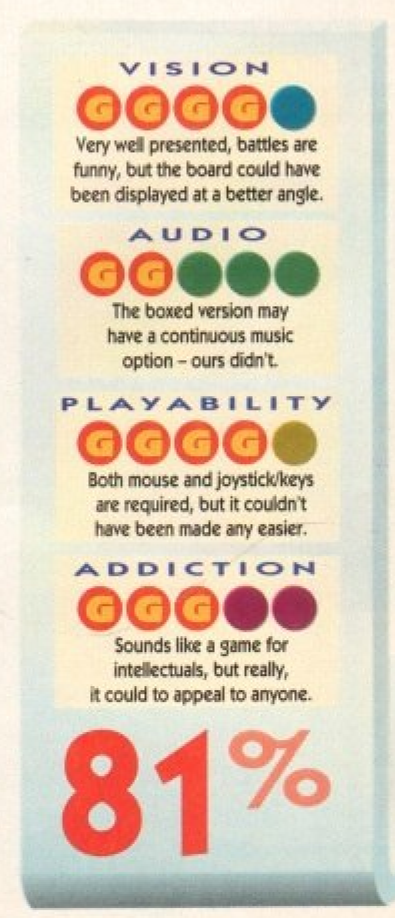


Odin begins the game protected on all sides by his army. He cannot be defeated unless surrounded on all sides by the Blacks. He pays for this strength in his limited moves – only two squares in a straight line

Pawns have unlimited moves in a straight line but are susceptible to knockouts, as they need only be surrounded on two sides. Useful for causing a nuisance and helping to manoeuvre another piece

If Odin reaches a corner, or any side of the board, he cannot be surrounded and has effectively won the game

Unlike the original King's Table, there are several special pieces – six in all, although only four can be used at any one time. Abilities of these pieces include moving diagonally, and taking any other pieces they land on



More animation than you can shake a stick at!

DRAGON'S LAIR 3 – The Curse of Mordread

READYSOFT ▪ £34.99 ▪ 512k ▪ Joystick/keyboard ▪ Out now

Anyone who has experienced the previous Dragon's Lair games will no doubt be familiar with the story, which consists of the fairly standard nasty witch/wizard kidnaps beautiful princess/maiden, holds her ransom for no apparent reason and cackles evilly as the kingdom rallies round in panic-type tale.

But for those who aren't clued up, I'll tell you more – because, unusually, the story is a major part of the game in this particular instance.

Daphne (the princess type) found herself kidnapped by some warlock geezer named Mordroc – Lord only knows why, but there you go. Anyway, Dirk the Daring (that's you) sets off on a dangerous rescue mission. The reason? Daphne is your sweetheart and you're going to get married.

Well, Mordroc must have some reason for his purloinment of the princess, and it's unreasonable and rather naive to believe that he would simply hand her back to Dirk without a peep.

Which of course he doesn't – in fact it is only Dirk's quick-witted cunning that enables him to divert the warlock's magic onto the man himself, allowing him to rescue his betrothed and sweep her back to the enchanted (surprise, surprise) forest where they resume a life a happiness together.

No-one seems to live in towns in these games do they? But it isn't that easy. Mordroc had a sister, Mordread, and she's none too chuffed that her sibling has been killed. Black magic runs in the Mor family it seems, and Mordread swears to avenge the death of her brother by condemning Dirk and Princess Mrs Dirk to the Vortex of Eternity, where they will never grow old and never die. Hey, real punishment – we should introduce her to Walt Disney.



Daphne dodges Mordread's fireball – can you do the same?

So the Vortex of Eternity it is then, and again it's up to Dirk to perform the suitably heroic deeds that will free him and the missus from this terrible fate.

The game is split into 20-odd levels, which are actually only single animated sequences, so packed with colour, detail and effects that it takes about half a dozen disks to fit them all in.

Dirk is faced with a problem in each sequence, related to the trouble conjured up by Mordread, which he must obviously solve in order to progress.

Having booted up the machine and loaded the game, I was absolutely gobsmacked by the brilliant animation of Don Bluth (last seen in Guy Spy, for the curious among you) that virtually leapt out of the screen at me. My God! This was going to be brilliant.

Or so I thought. As it transpires, the gamer is not in total control of Dirk in true arcade style – there are a limited number of moves he can make, and instead of initiating the action you must take note of what happens around you and respond to it.

Unfortunately, and quite unbelievably, your responses are limited not only in terms of movement but also in terms of the time at which they must be carried out.

Whereas pushing back on the joystick or keys would normally – obviously – move your character backwards, Dragon's Lair for some reason insists that your move is carried out at the exact time the programmers intended it, otherwise Dirk will simply not respond.

The obvious moves are not always the correct ones to make, and even if you do choose correctly, then unless it's timed just right you'll lose a life, and may quite reasonably think that you made an incorrect choice.

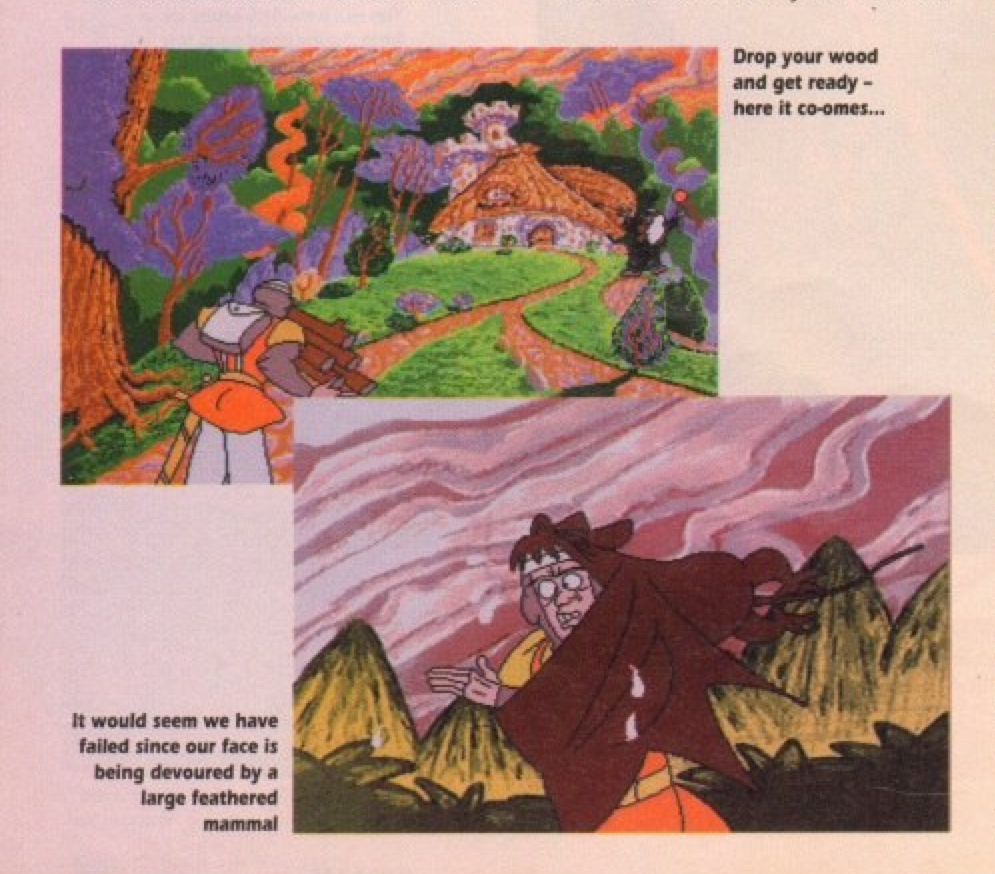
If this sounds laboured I apologise, but unless you have actually experienced the frustration of this as I have then it's difficult to understand just what how ridiculously unplayable the whole thing is, which is a real shame as the presentation is absolutely superb.

Dragon's Lair 3 resembles a high class running animation demo more than a game, but even as such is rendered close to useless because of the difficulty in accessing the later levels.

After being treated to the stunning level of detail, I am genuinely disappointed by this game as it offers nothing in the way of gameplay and is far too expensive to purchase just as an animation package.

If the playability came even remotely close to the presentation then Dragon's Lair 3 would be a worthy winner of a Gamer Gold – as it is, unless you desperately need to see some beautiful animation and have plenty of cash to spare, I just can't see any reason to buy it, which is sad.

Paul



Drop your wood and get ready – here it co-omes...

It would seem we have failed since our face is being devoured by a large feathered mammal








Eh, look here if it isn't an old friend of mine. Who is it, you cry? Ah, well it goes by the name of Mr Hype. Hello Mr Hype, do you mind if ask you a question? Sure, fire away. What do you think of Street Fighter 2?

Street Fighter 2 is undoubtedly going to be the best beat-'em-up ever on the Amiga, is going to be faithful to the SNES version and will feature amazing graphics, mind-blowing sound and absolutely brilliant playability. SF 2 is the hottest two-player arcade action game you can get. It has gargantuan sprites and stunning fights – in fact it's the game that the Amiga was made for.

Hmm, thanks Mr Hype for your unbiased and objective comments. So kids do you honestly think that Street fighter 2 will be as good on the Amiga as it is on the SNES? Ha, well I personally think you've been ever so slightly conned.

Hands up who got the game from Granny and Grandad for Christmas and eagerly loaded it up and then wept

High on hype, low on speed



US GOLD ▪ £27.99 ▪ 1 meg ▪ Joystick ▪ Out now



It's Chun Li against Blanka. Size isn't everything



Doesn't Ryu look really tough in his pyjamas?









buckets. If you have a friend who owns a SNES and SF 2 I would keep the fact that you've got a copy of SF 2 on the Amiga very quiet indeed.

Perhaps I'm going over the top because Street Fighter 2 isn't really that bad. It's not amazing, but thanks to Mr Hype your expectations have been unnecessarily raised and you probably think that the game is going to be the best ever on the machine.

That's Mr Hype for you, making the eager young(ish) devils that you are scribble the game down on your list to Santa and find out that it's not quite as good as everyone says it is.

Right, now I've got that grumble off my chest I might as well tell you about the game even though you probably know everything that there is to know about SF 2, from what moves Ryu does to the size and colour of Blanka's underpants.

The object of the game is simple because all you have to do is take your fighter around the world beating the crap out of all the other fighters.

It does have some things going for it and one of those is the fact that you have a choice of eight fighters.

You can pick Ryu, a sort of Karate kid lookalike; Ken, like Ryu with blonde hair; Dhalism, an Indian rubber man; Guile, an American GI with a Bart Simpson hairdo; Zangief, a wrestler who likes nothing more than throwing oiled men around a ring; E Honda, a fatty sumo wrestler who needs a bra; Chun Li, a Chinese Cynthia Rothrock type and last but not least, Blanka, a green-skinned monster with orange hair.

Each fighter has his/her own special moves. For instance Chun Li has the vicious spinning bird kick among others and Edmond Honda has the hundred hand slap, a sort of handbags at 40 paces kind of move.

Also included from the coin-op are the gratuitous violence bonus screens. The fighter is given the chance to earn bonus points by either smashing wooden barrels to pieces, punching and kicking three burning cans or wrecking and destroying a snazzy and very expensive car. Hey, if that isn't gratuitous I don't know what is.

Street Fighter 2 was never going to be as good as the Super Nintendo version, but I have to admit that Creative Material have had a damn good go and possibly done the best job that they could do considering the Amiga capabilities that they had to play with.

The graphics are almost identical to the coin-op with the exception of loss of colours, but unfortunately they're very jerky and also the collision detection is rather dodgy. It's not funny when someone hits you and you're nowhere near.

The sound is not brilliant and when Chun Li attempted her 1,000 kick manoeuvre she sounded like a dog yapping. Some of the original speech is included though with the fighters screaming all manner of obscenities that sounds like japanese.

The game is slow – not as slow as a tortoise, but more your old age pensioner kind of speed. It's much better in one-player mode simply because it slows down to sloth proportions in two-player. Some of the special moves will only work once in a blue moon and are more than a bit fiddly, but seeing that the SNES has six buttons and the average Amiga joystick only has one I can't really moan that much.

On the easiest level I completed the game in one go, but stick it up to the hardest and you won't have a chance

Overall Street Fighter 2 will be a disappointment to most Amiga games players due to the fact that the game has been hyped too much.

When it comes down to the crunch SF 2 is just slightly better than your average beat-'em-up. If you've not bought SF 2 I would save your money and wait for Body Blows by Team 17 and if you have bought it, then tough.

As Chuck D and Flavor Flav from Public Enemy cried in unison: "Don't believe the hype!"

Jonathan



Ouch, bet that made his eyes water...



The battle of the blonde haircuts. It's sad, very sad indeed.



Superhero



Core Design are awakening from their post-Curse of Enchantia slumber with a sequel to the groovy Chuck Rock. Paul puts on his cape and picks up his club to check it out

Psygnosis are a funny bunch – one minute they have you writhing in delight at the antics of their Lemmings, the next you're howling in disappointment at the likes of Red Zone and, as featured in these pages, Air Support.

This time they are venturing down the well-trodden avenue of the beat-'em-up. You may have noticed – I certainly have – that most of those offerings on the market at the moment are so similar that it really is a case of pot luck as to which are bought.

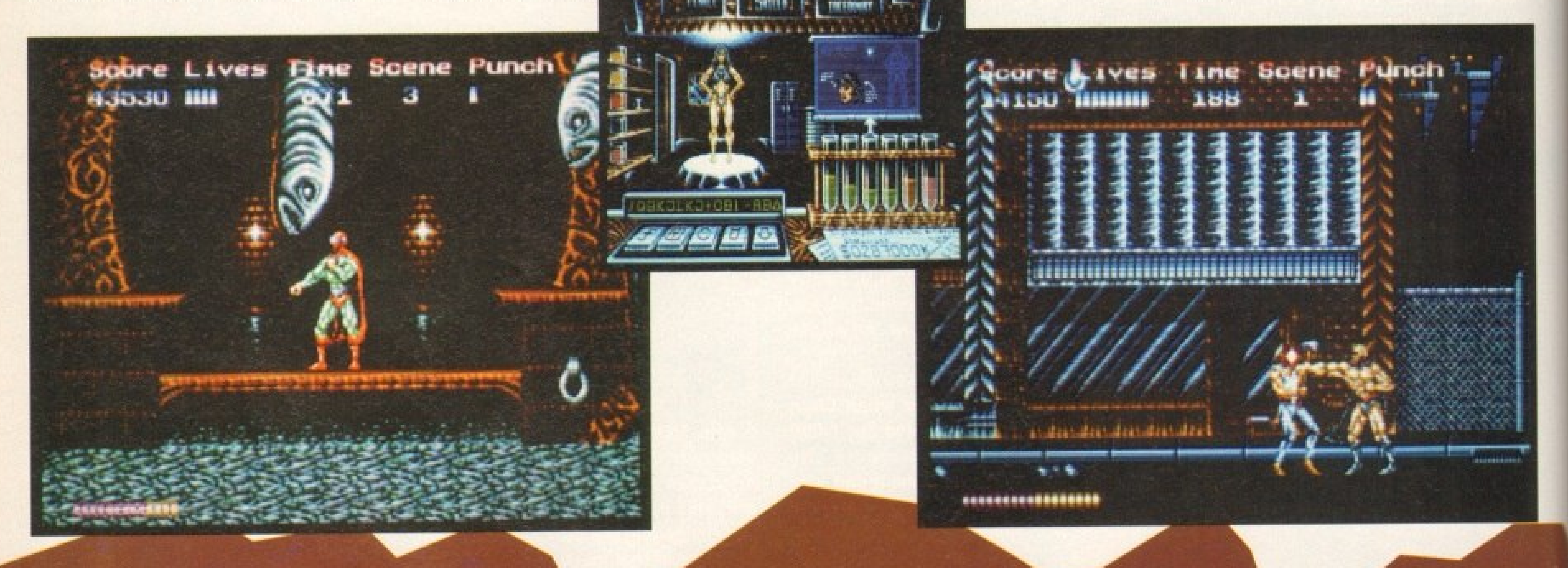
But by Jove! – you know I think Psygnosis may have hit the nail on the head this time with the innovative Superhero. The story is set in the USA in the year 2005, when anarchy rules the streets and everyone takes a rottweiler to go shopping.

This is apparently all down to some bloke called Apex, a powerful genetic mutant seeking revenge on a world he believes made him the freak he is. Everything is going to pot – what the world needs is some kind of do-gooder with similar abilities to put Apex in his place. You come in at this point, as you'd guessed, chasing Apex through the streets of America and generally beating up whoever you come across. Sound like a new concept? No? Well it is...

Before you actually get your mitts on anyone, you must decide what kind of superhero you want to be, and are provided with a "Design-a-Superhero Kit". Strengths, weaknesses, genetic make-up – even the clothes he wears can all be designed to your own specifications.

For instance, you might want a Batman-type character, complete with cape and pointy ears, or perhaps you'd prefer a new kind of crusader – say, a woman with big muscles, a blue face and jeans.

Virtually anything is possible, and from what we've seen so far, it looks like a lot of fun.



Chuck Rock 2: Son Of Chuck

Chuck Rock was well received and regarded as probably the best of the numerous caveman platformers when it first appeared on the Amiga many months ago. It revolved around Chuck Rock himself tracking down the nasty Gary Gritter, who'd kidnapped his girlfriend, Ophelia.

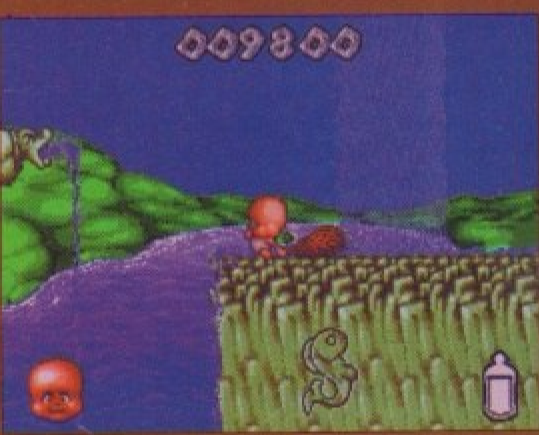
After his victory Chuck's confidence soared, he began to feel better about himself – he even learned to ignore his own pungent odours – his confidence soared, and we now find him as the President of one of a car manufacturing company – making cars that he himself designed. Oh yes, and he managed to find time to have a kid with Ophelia, who is now his wife.

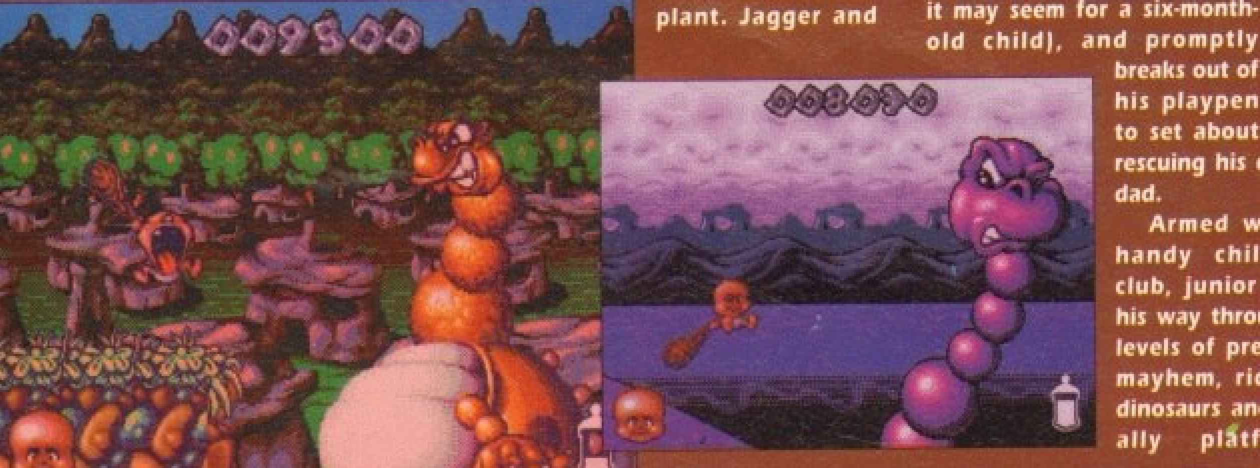
Another dubious rock star soundalike – Brick Jagger – owns Datstone, rivals to Chuck's car plant. Jagger and his heavies Brian Clay and Rabid Bowie (not) kidnap Chuck, informing Ophelia that he will be unceremoniously hacked to bits unless she signs over Chuck's business to them.

Chuck Junior overhears this conversation (unlikely though it may seem for a six-month-old child), and promptly breaks out of his playpen to set about rescuing his dear old dad.

Armed with his handy child-sized club, junior bashes his way through five levels of prehistoric mayhem, riding on dinosaurs and generally platforming around. Beginning in the suburbs, you thrash through the jungle, past volcanoes and across cliffs before winding up at the Datstone Car Plant, where Chuck Sr is being held.

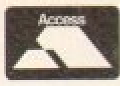
The graphics look great, and with the addition of loads of bonus levels and new characters, Son of Chuck is looking like a very worthy successor to the title of King of the Cavemen.



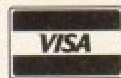


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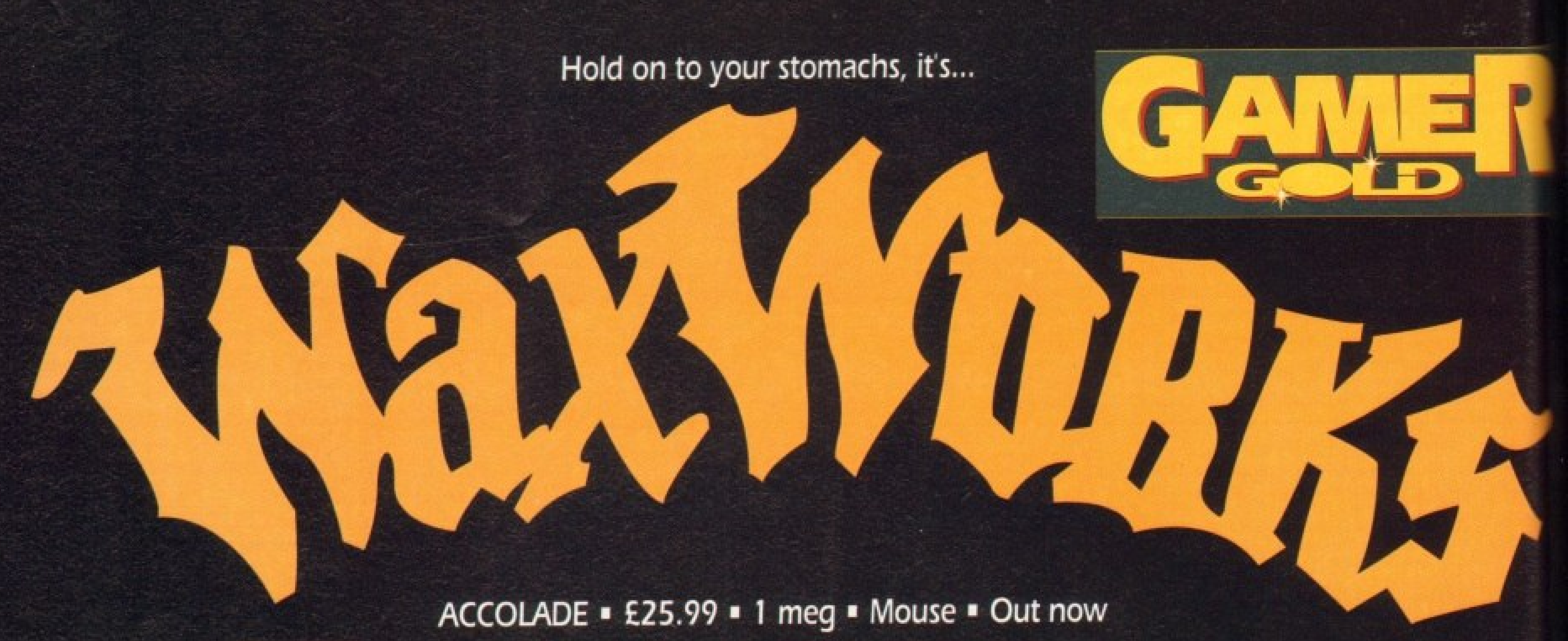
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Hold on to your stomachs, it's...



ACCOLADE ▪ £25.99 ▪ 1 meg ▪ Mouse ▪ Out now

If I had any say in what should have been number one in the games charts last Christmas it would have been Waxworks in a joint first with Darkseed. But I think there would have been a serious outcry from the parents of young children if they had all rushed out and bought Waxworks.

Seeing your five-year-old child bursting into fits of giggles on seeing the semi-severed head of one of Jack the Ripper's victims is probably not how most parents would like to spend their Christmas.

I think it should be stressed that although Waxworks is an excellent game it won't appeal to everybody and some people will find it completely offensive. Many of us in the office are still baffled as to how the game got on to the shelves without it having an age certificate attached to the box.

But who are we to decide what should and should not be available to the public? I wouldn't wish Biffa on any unsuspecting member of the society.

The composition of Waxworks is brilliant. The programmers have taken basic elements from adventure and arcade games, combined them with some truly inspired graphics programming and come up with one of the most devilishly hard games I've seen in well over a year and a half.

It's basically an adventure game but it's split into four different scenarios instead of one huge one. This serves to keep the gameplay fresh and the graphics interesting.

In each scenario there is one large monster you have to kill – this monster is actually the evil sprit of your twin brother which has over taken the waxwork which you have chosen to enter.

The first of these scenarios is an Egyptian pyramid which you have to explore. As ever there are various things that are there to hinder your progress, in this scenario it is the pyramid guardians who will hack your bits off at any opportunity.

There are lots of rooms and things to explore and there are always lots of other items like weapons and so on that will help you but it all boils down to a maze game so it's always a good idea to keep a map.

In the next scenarios it turns out that you are Jack the Ripper. It was in fact your evil twin brother who had killed the little girl lying in front of you but the police don't know that and they have seen you near the body so you are a hunted man.

Again it's a bit of a maze. Belting round the streets of 18th century London you're bound to get a bit lost now and then aren't you?

This section is probably the most graphically stunning part of the game. You can even climb up on of the roofs and look out across the Thames.

The main thing you have to worry about is the police – stay in the same place for too long and that's it, to the gallows with you. That's why the first thing you have to do is find yourself a disguise.

And it not just the police you can run into, you can also get beaten to death by the angry mob which the daughter's father has put together. If



They just don't know when to give up, do they?

Mummy why is that green man inside that goldfish bowl?

you get really stuck at any point in the game you can call on your deceased uncle who communicates to you through a crystal ball which you have in your possession.

I know it sounds a bit silly but it really is done very well – you even have that animated face of your uncle's mush talking to you.

The next scenario is mine-infested with killer plants and mutations which are dying you give you horrible infections that will kill you in seconds flat.

To protect yourself you have to find a plant sprayer filled with insecticide which I found quite hilarious. Then you have to take tools and other equipment from the bodies of the ex-mine workers who were unlucky enough to get tangled up with the rouge plant and its friends.

The final scenario is the graveyard scene – you have to find your way around the maze of gravestones and into the crypt of your ancestors.

This wouldn't be too hard a task but of course this is a graveyard so you have zombies by the dozen chasing you and trying to rip your limbs off. I can find little fault with Waxworks apart from the fact that most of the scenarios involve some sort of maze or other which can get a bit annoying.

Ben



Do you ever wake up with blood every where and all you can think of is Wednesday?



All of a sudden Billy loses his heada

VISION

Hold on to your lunch, fantasticly gory.

AUDIO

Good atmospheric tunes which don't wear thin.

PLAYABILITY

All the fun of arcade and adveture games.

ADDICTION

Very addictive, you'll be glued.

94%

You look familiar – have we met before?

ZYCONIX

ACCOLADE ▪ £24.99 ▪ 1/2 meg ▪ Keyboard/joystick/mouse ▪ Out now

Here's a quick intro for those not in the know... There's a game called Tetris that features blocks of varying shapes falling vertically down your computer screen intent on nothing more than causing a blockage, thus concluding the action and ending your fun.

Fun? But how can one derive fun from such a seemingly futile exercise in basic computer graphics? By preventing the blocks from building up – that's how.

Yes, simply rearrange these little devils into horizontal lines using just a handful of keys, causing them to disappear and consequently elongate your game.

Sounds easy, doesn't it? – not to mention boring, pointless and dull. By jiminy though, it's addictive, and possibly the world's most widely played game.

Why am I telling you all this? Well, as with any successful concept, there are those who aspire to the same greatness – Columns, Towers – call them what you will, they're all younger, less meaty brothers of the classic Tetris.

Zyconix is a member of the family too – kind of an incest-spawned, two-headed child with a hair-lip and a limp, if you will, because it does have a few original quirks.

The basic idea is the same – simply don't allow the screen to fill up. Instead of different shaped blocks though, you are bombarded with coloured rectangles that need placing in colour order, either horizontally or diagonally, to keep your screen clear.

Half a dozen or so different projectiles may fly at your blocks from time to time, and range from bombs and utility blocks to a rebounding ball that constitutes a mini-Blockout game.

As well as the standard mode there are three variations, each one accompanied by its own tune – jazz, rave, funk or soul, whereby you choose whether to race against time, go for bonuses, and other such shenanigans. There is even a two-player mode, played side by side.

Overall Zyconix is a very competent variation on a theme, but Accolade may find that many people are unwilling to pay full price for a game that appears in many forms in budget and PD libraries.

Having said that, unless you already own a so called Tetris-clone, you could do worse than check it out – it's fun, addictive and one of the best of its kind on the market.

Paul





Licensed to... erm, thrill – surprisingly

LETHAL WEAPON

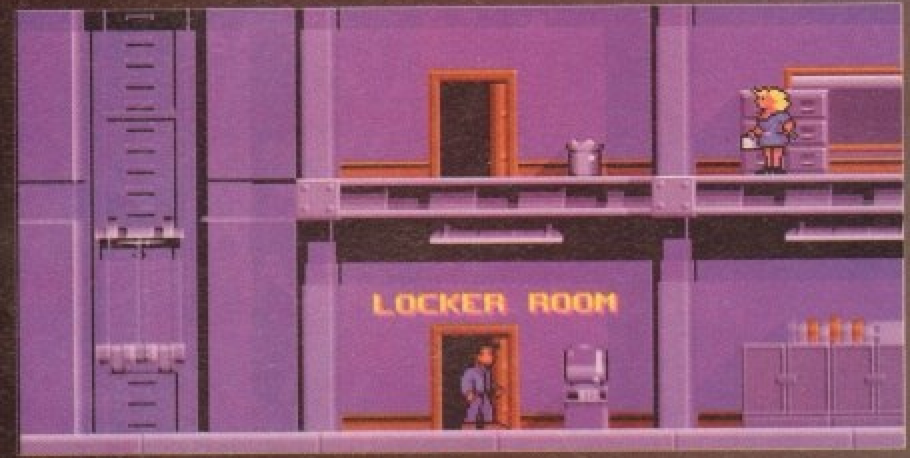
OCEAN ▪ £25.99 ▪ 1 meg ▪ Joystick ▪ Out now

The last thing that the toiling Gamer team wanted was another platform game after the excesses of Christmas. Especially after having to beat some drunken fool back up the chimney because he nicked my mince pies, but alas here it is – the first of a new breed of 1993 platformers.

Ocean are really into this film tie-in thing, they do all sorts from Hudson Hawk to Cool World and in my opinion they don't do them very well. Basically because none of the games resemble the film in any way. You play the role of Riggs or Murtaugh the head case copper who is played so well by Mel Gibson in the Lethal Weapon films. Thus, being a nutty copper with a testosterone overdose, you are sent on various ridiculous missions in which you are hideously outnumbered by axe and machine-gun wielding psychopaths.

Loathed as I am to say it I actually quite got into Lethal Weapon. It has a certain simplicity, unlike most games which treat you as though you should be knowing what you're doing seeing as you bought the game and everything.

Your character starts off in police headquarters and you have to bound around from room to room to choose your first mission. There are three to choose the first of your three missions. One you cannot select until you have picked up a secret code from somewhere or other.



Think I'll check if Danny Glover's cleaned his undergarments after our last hair-raising/humorous escapade

This was the first aspect which drew me to the game. You aren't thrown in right at the deep end, you start off on a relatively easy mission and work your way through.

I was quite disappointed at first with the graphics because they seem unnecessarily simple but the reason becomes apparent after you've been playing for a bit. Each and every sprite on the screen has its own individual little movement whether it be looking around furtively of having a peek over the side of a ledge. which is a very strong sign that the programmers have taken a long time over the game.

The rest of the scenery is very simple, barrels, plain walls and the like which gives the game a very spartan appearance. Apart from that, the graphics are pretty spot on – everything moves very smoothly and clearly.

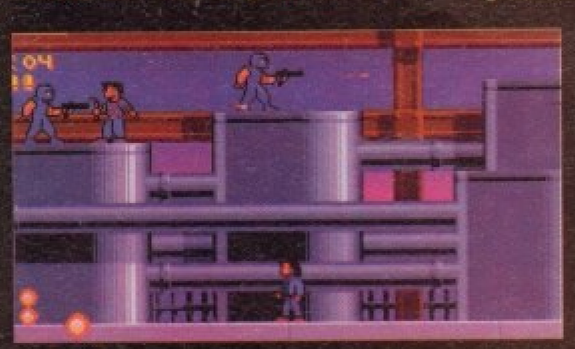
There are three main sorts of baddies. The first are the usual henchmen – in the films you usually have about four or five of them who get shot in the first scene. Basically they're stupid and wait for you to shot first.

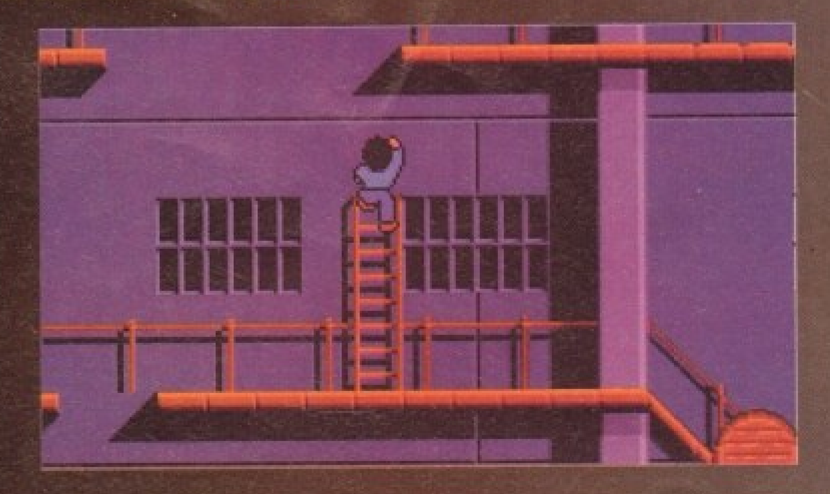
Next up are the commando types who get shot very quickly. But you have to watch them they do shoot very quickly too. Last but not least is the mad Chinese man with his meat cleaver – no gun, just a big chopper. He tries to lop your bonce off every time you venture in his space.

Sound FX are pretty much what you might expect – gun noises, things falling over and people dying – they're certainly not bad, but the game would undoubtedly benefit from something a little beefier (how about a cup of Bovril – Ed).

I must admit that I did like Lethal Weapon a lot – I never have been much of a fan platform games but this one is appealing to all levels not just the hardcore bunch. In saying that true platform fans may find Lethal Weapon a bit easy some respects. Either way well worth a look.

Ben


Er, I'm down here boys


'Now Mel luvvy, if you'll just dive backwards and land on your head, we'll call it a wrap, dahling!



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Curse of

Are you cursing at Enchantia? Fear ye not chums, for we are here to calm the nerves and soothe the brain. Actually it was nothing to do with us – hearty thanks and manly handshakes go to Keith Grabban of Bath for saving us the trouble. Part two next month...



DUNGEON

Shout for help – after guard leaves the dungeon, pick up the key and unlock chains. Go to the wall on the far right front and pick up coin. Push the wall at the back right to reveal a hole. Pick up paper clip from hole and unlock the door with it.

HALLWAY

Pick up the fishbowl next to the door and proceed left. Avoid the mallets and the whale if possible, collecting all the jewels along the way until you reach the door, which of course you walk through.

UNDERWATER

Put the fishbowl on your head and go to the railings where the fish is trapped, and push the railings to release it. Go left and look at the hole in the ground – pick up the pipe from the hole.

Say "hi" to Mr Fish at the shop and give him the pipe in exchange for some oxygen. Continue left, where the freed fish will drop a shell for you to pick up.

Wait until the turtle is above you, then give it the shell and it will give you a ride over the electric eels. Look in the reeds to the left and pick up the electric prod.

Fight the shark with the prod, continuing left until you reach the plug. Insert the prod into the plug – you will be transported to the cave.





CLIFFS

Keith's advice is to save your game often along the cliffs, to save you being transported way back should you fail.

Go to the right, pick up the rubber gloves, and stop at the big rock. Push the rock, jump over the rock, and continue to the right until the rock falls on you, transporting you back to the start.

Follow the same path as before until you come across some buttons on the wall, pushing buttons 1, 2 and 4 in and 3 out, whereupon a path will appear.

Walk right, pick up the rope and walk right again just before the electric man. Fight with rubber gloves on and continue right until you reach the falling rocks.

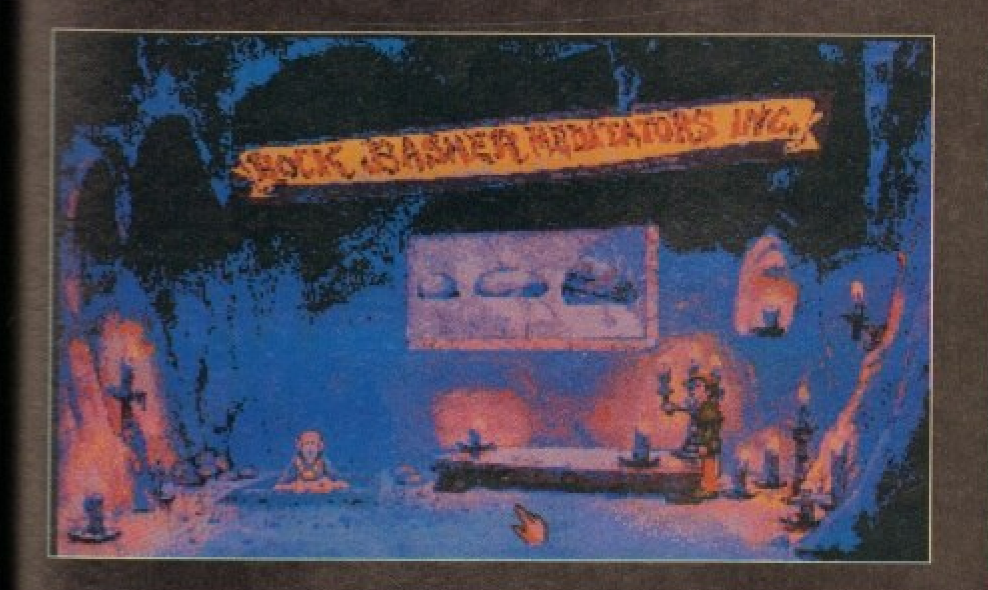
Wait for rockfall to end and walk to first recess (cave?). Stay here until the next fall ends, then go right, into the next cave, and pick up the chewing gum.

Wait for yet another rockfall to cease then go right, wearing the chewing gum (yes, you read it correctly!), and you will pick up a rock on your head. Throw the rock to form a pathway, walk right, throw rope, jump rope, then walk right and look at writing on wall.

Now you have to let the big rock fall on you and be transported back to the start, making your way here all over again – don't worry, it's easy second time.

On returning to this point, go to end of trail and say "Open sesame". An opening will appear – walk to the opening, say "Hi" to the bird, and you will be transported back to the village.

Enchantia



COUNTRYSIDE

Look behind the large rock in the centre and pick up the jewel. Go left onto the footpath until a pirate appears. Pick up the knife and fight him with it, then pick up the money he leaves behind. Follow the path to the village.

VILLAGE

There's plenty to do in the village, but here's the stuff that will help you. Go into the village square and turn left. Keep going left until you see the sign for Sally See-All.

Go in here and give money to the seal, who will give you a clue as to where you should go next. Return to the square and go straight ahead, to the Mage's. Give some money to the wizard, and he'll transport you to the cliffs.

CAVE

Come to the very front right of the cave and first look, then pick up the seaweed. Go to the back wall, push the button, and an entrance will appear. Pick up as many rocks as you can carry from the places indicated on the map (there may be more).

When your sack is full, follow the map to the Rock Basher and give him all your rocks. Now go and fill up your sack with rocks again and bring them to him.

Find the plank, pick it up, and use the plank with rock. Make your way to the gold coin, picking up the remaining coins on the way. Return to Rock Basher, who will now give you a stick and string.

Go to the cave with the four holes in its wall and look in all the holes to make a creature emerge. Look again in the hole on the far right, and pick up the twigs that you will now see in there.

Use twigs with seaweed, then go to the computer cave, pick up computer and look in the hole in the wall, where you will find a wire reel.

Return to the plank cave, stand behind the plank and throw the computer, which will catapult you onto the ledge. Pick up the magnet, jump to the stone, and go back to the computer cave. Use the stick/string with the magnet and throw the magnet into the hole.

You now have a reel of wire. Go back to the mud monster and use the wire with the tent pegs in the ground. Now pick up the mud left behind by the monster, and use it with your newly made mask.

Walk to the well and throw in your gold coin. Pick up both the money and the girl that appears (bit dodgy – Ed).

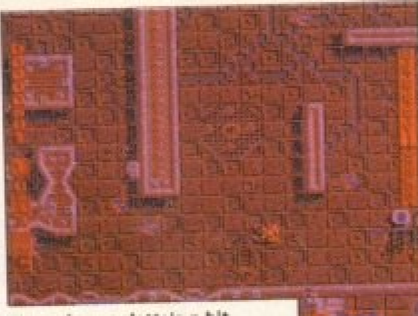
Also pick up the baseball cap and go to the falling rocks. Wear the cap and go right, to the exit. Jump in the bucket and wear the mask, and chocs away!

CAVE MAZE

MAGNET
PLANK
EXIT
FALLING ROCKS
TWIGS
GOLD COIN
HOLES
COMPUTER WIRE REEL
WELL
X = ROCKS
START HERE
ROLL BASHER
MUD MONSTER
PEGS



Pretty interval screens like this make up for the lack of impressive on-screen graphics



The colour palette's a bit browny all the way through



The in-game computer, but does it have Tetris?

This big white beam is one of the doors you have to shoot to open

It's a long time since anyone has had the bottle to put a game of this ilk out. Tank games of this sort are ten a penny on the budget market but they get very boring very quickly.

But if you are like me and have an eternally open mind (cough cough) then you can appreciate that such products as this have a very basic idea to them.

At first sight Cytron looks like a pretty poor effort. In the ever-expanding world of computer graphics it is very rare nowadays that you get a game with less that average graphics from a company as big as Psygnosis.

Rampart is the only other game that has been released recently that I can say would do well in spite of the pretty poor graphics.

Your mission is to pilot Cytron, a freshly developed multi-use tank with more weapons than a big, well-armed thing, around a research centre saving scientists. Cytron's main gimmick is its ability to divide itself into smaller and more manoeuvrable craft with even more silly weapons for you to start blitzing the inhabitants with.

You infiltrate a secret research base and rescue the humans trapped there by the mechanical workforce that has basically thrown a wobbler.

Unless you get in there soon the machines are really going to go bananas. To prevent these mechanoid menaces doing any more damage, once you have rescued as many people as possible an automatic destruct sequence is activiated, so if you don't get out in time you go up with it.

The humans are pretty easy to find but they don't seem to show any intelligence at all which I found a bit disappointing. They will just walk until they reach a wall and then keep on going, getting nowhere fast

The mad mechanoid workforce which you are up against is pretty formidable to say the least. Stormers, Bouncers, Assassins, plus supporting cast each with their own little quirks that make it a real challenge.

None of the opposition is anything new to arcade games of this sort but the sheer volume makes up for the lack of originality. Generally they aren't much of a problem but they certainly don't give themselves up for easy cannon fodder – they usually move like excrement off a red hot shovel, and Cytron is not the most manoeuvrable of vehicles.

One rather irritating aspect is the enemy robots called Assassins which are pretty deadly and look very similar to the humans you pick up.

If you remember that you are up against a time limit and most of the time are travelling at breakneck speed, you don't have enough time to take in the physical characteristics of each sprite so quite often you find yourself getting stuffed by the Assassins.

As you travel around the several levels, the first thing that strikes you is the smoothness of the scrolling – it is quiet awesome. Next are the sound effects – the various booms, blams and blaps are really satisfying as well as the atmospheric sounds that are thrown in for good measure.

One thing that is cropping up more and more in games nowadays is an interactive in-game computer. The first one I ever saw was on Alien Breed where you could change weapons and buy keys and so on.

It's pretty much the same on Cytron – you can upgrade your weapons depending on how much ammo you have and on the more tricky levels you can get plan view of the level to find out where you are and how to get round it.

The individual ships have their own weapons – choose either a bomb launcher or a laser – and these can be individually upgraded if you need something with a little extra umff behind it.

Cytron's a breath of fresh air after the recent spate of adventure-type games. A good shoot-'em-up combined with a bit of a puzzle.

Ben

VISION
Awesomely smooth and well defined.

AUDIO
Fair to middling, nothing special but good meaty explosions.

PLAYABILITY
Easy to get in to, fun to play.

ADDICTION
Definitely one that will keep you coming back.

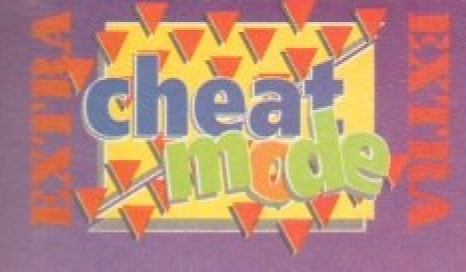
83%

Mine splits in two!



Cytron in bits

That thing that looks like a mug with some sausages sticking out of it is the Cytron





Not content with just bringing you the solution to one of the hottest adventures around, we outdo ourselves once more!

The Humans

Yes, here are The Humans level codes in all their prehistoric entirety. And would you credit it – we've even got a couple of titbits for Pinball Fantasies fans.

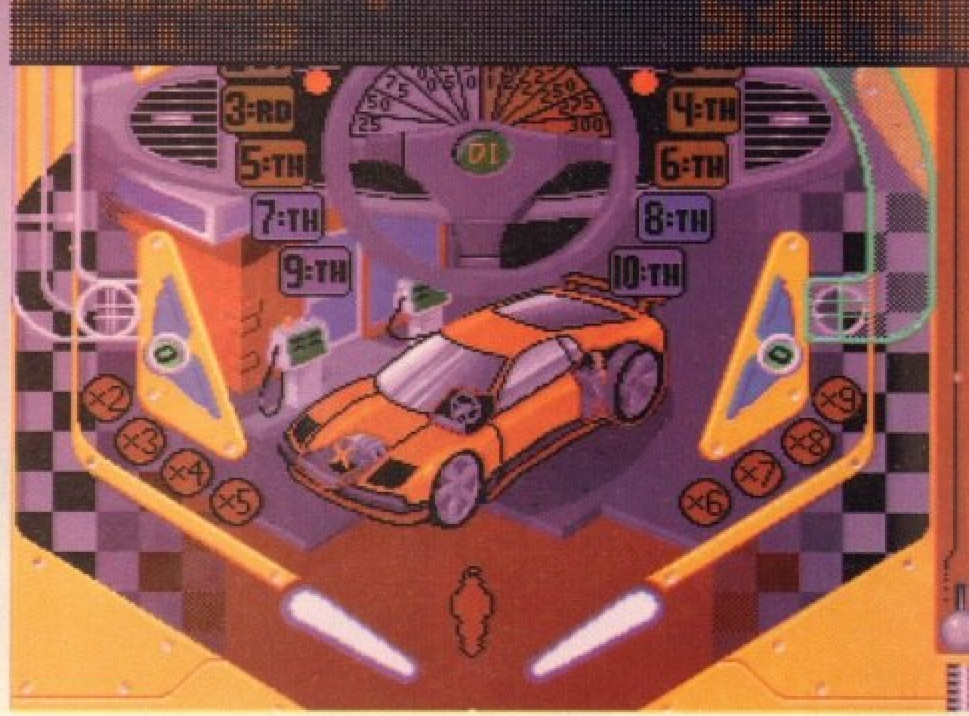
Thanks to Greame Faichney from Linlithgow, West Lothian for the codes – you will get your reward in heaven Greame (because you certainly won't get anything from us!)

Level no.	Level code	Level no.	Level code	Level no.	Level code	Level no.	Level code
1	Darwin	21	Villa3Boro2	41	Bonus	61	Daemonslate
2	Andie Pandy	22	Early Morning	42	Bouncing	62	Big Rab
3	Get A Life	23	Boro4Leeds1	43	No Money	63	Miami Vice
4	Carlos	24	Easy Life	44	A S F	64	Margaret M
5	Howie	25	Jims Ties	45	Vision	65	A34732473
6	Mooble	26	Parkview	46	Sisters	66	Help Me
7	CSL	27	Niceneasy	47	Fast Fashion	67	The Exiles
8	The Humble One	28	Green Card	48	Cargo	68	Eightlands
9	Pixie	29	Cookie	49	Rab C Nesbitt	69	Wine And Dine
10	Milestone	30	Malcy Malc	50	Rangers	70	Nin
11	War War War	31	Raving Burk	51	Rainbow	71	Technophobe
12	J McKinnon	32	You Got It	52	Doody	72	Getting There
13	Unlucky	33	Sgnimmel	53	Mighty Baz	73	Time Is
14	Blue Monkey	34	Ministry	54	Tired	74	Running Out
15	Red Dwarf	35	Mad Freddy	55	Consolidated	75	Lords Of Chaos
16	Bad Taste	36	Bizarre	56	Stay Happy	76	Now Its Done
17	The Kitchen	37	Free Scotland	57	America	77	Im Out Of Here
18	CJ	38	Apple Juice	58	Another Day	78	Heres To A
19	Sort It Out	39	Pay Day	59	Isolation	79	Better Life
20	Smart	40	Bananna Moon	60	Promised Land	80	Bye Bye Bye

Pinball Fantasies

Fed up with managing on a paltry three ball ration? Type in "extra balls" after loading any table and you will find yourself, not surprisingly, with two extra balls.

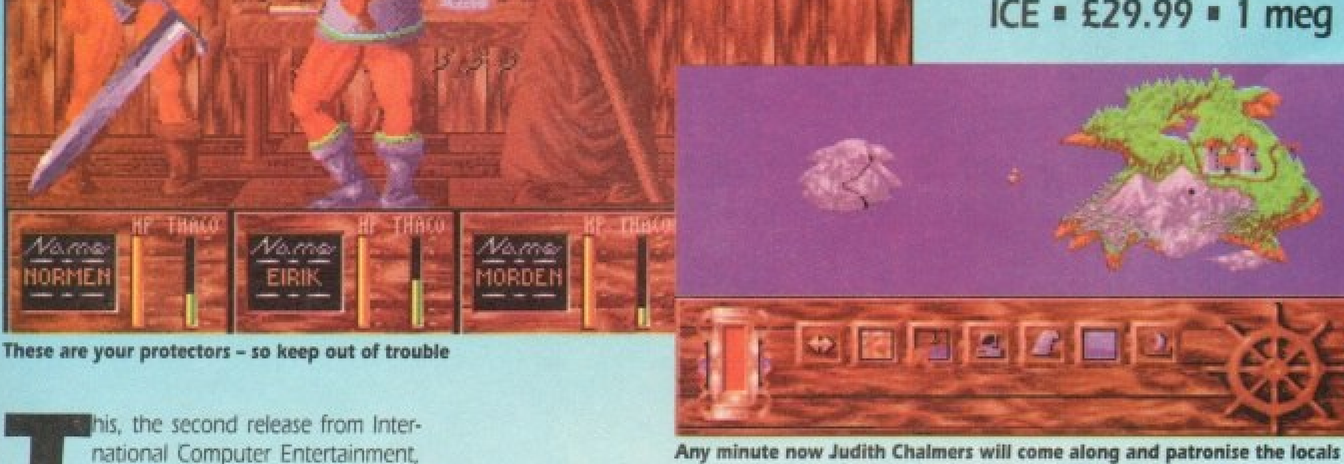
If you're still crap with five balls then type in DIGITAL ILLUSIONS, and even the ludicrously inept will find it impossible to lose their ball.



Shiver me timbers ye varlets

PIRACY

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These are your protectors – so keep out of trouble

Any minute now Judith Chalmers will come along and patronise the locals

This, the second release from International Computer Entertainment, has a hard act to follow if it is to continue to build their reputation as developers of quality games, since the still popular Fireforce made for an excellent debut.

It's a bit of a mish mash actually – essentially an adventure of sorts, not only does it sport a hefty trading element, but also leans in places towards arcade style combat, and even has the odd maze thrown in!

Evil forces have the world in their grasp – they stole the Golden Chalice from the ancient Halls of Balance, and until it is restored darkness will prevail, more than likely.

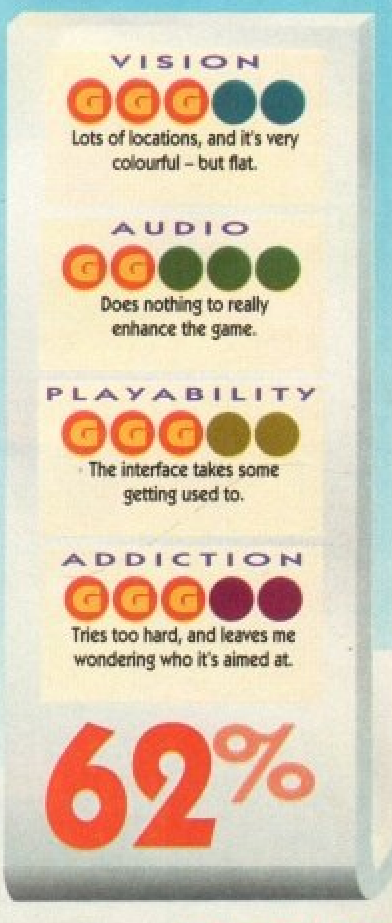
With your crew of three bizarre outcasts you will have to sail around the old West Indies in your trusty boat in search of the fabled holy drinking vessel. At the beginning you are presented with a map of dozens of islands, featuring your boat as a small dot. Decide where you would like to go first, and with the icon-driven system raise your anchor and set sail. If it's possible to land on the island an icon will appear, and you can leave the ship.

Throughout the game you are looking for clues as to the whereabouts of the chalice. The island natives are a suspicious bunch though, and unlikely to divulge much information unless you first gain their trust by trading with them – building up your cargo as you go. Additional crew members can be hired, and as your wealth grows more boats can be purchased.

While on the seas you will from time to time encounter pirates (a-ha, so that's where the name came from) who demand money or who will come aboard to fight one of your three original crew members. Land bandits are also in abundance, so beware.

Piracy attempts to combine elements of all types of games – a task that were it successful would present us with an absolute stonker, but it's virtually impossible and ultimately Piracy tries too hard to please everyone. It's a real shame actually because an excellent game lurks somewhere beneath the programmers' over-ambitiousness.

Paul



A BLAST FROM THE PAST 92 91 90 89 88

Game Title: Arkanoid – Revenge of Doh
Company: Imagine Software

Paying tribute to the rich legacy of games in the Amiga's illustrious history, Ben Styles reviews two more oldies

Since the birth of the video game, Arkanoid has existed in a lower form. It hasn't always been called Arkanoid, it's usually better known as Brick Out. Yes it's the old move-the-bat-to-hit-the-ball routine, the basis for the vast majority of games consoles before 8-bit machines. The full title of this version is Arkanoid – Revenge of Doh. Doh is a nasty organism-controlling beastie who bimbles around the galaxies taking control of the natives willy-nilly.

So what do you do, eh? Well personally I wouldn't send a cigar-shaped space ship to bounce balls around but apparently it does do some good.

There is little deviation from the original Brick Out game. You are a bat at the bottom of the screen and you have to bounce the ball around and knock out the bricks to progress to the next level.

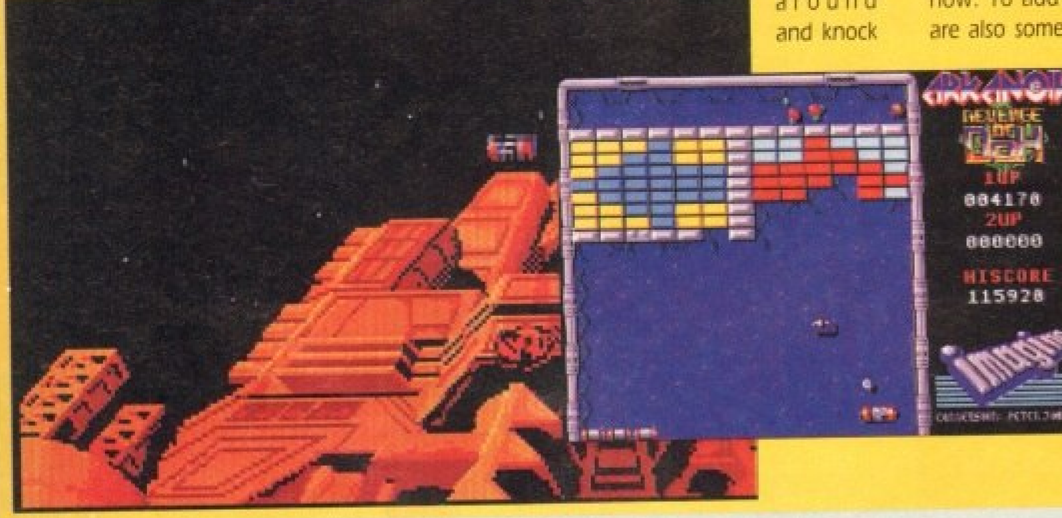
The main difference between Arkanoid and the original is the power ups. By knocking out certain bricks, capsules drop down. These do all sorts when you catch them, from making your bat bigger (fur gufaw yip yip) to running a multi-ball sequence.

There are hundreds of them – we're still coming across new ones now. To add a bit of spice there are also some little space invaders to hinder your progress – these tend to deflect balls and send them in a totally different direction. They do have some worth as far as scoring goes but generally they are a pain in the nethers.

Arkanoid is the definitive bat and ball game. There are quite a few clones nowadays but nothing has come close. And the novelty takes some time to wear off.

A classic.







Game Title: Jimmy White's Whirlwind Snooker
Company: Virgin

Snooker is another game which has had a million and one different versions of itself released in the last few years. Jimmy White's, as it is known, is the definitive version of the Crucible classic.

You view the screen from any angle you wish by panning left, right, up, down, in and out (shake it all about) with the mouse button. Once you have the view you want you have to rake your shot – quite an important part of snooker.

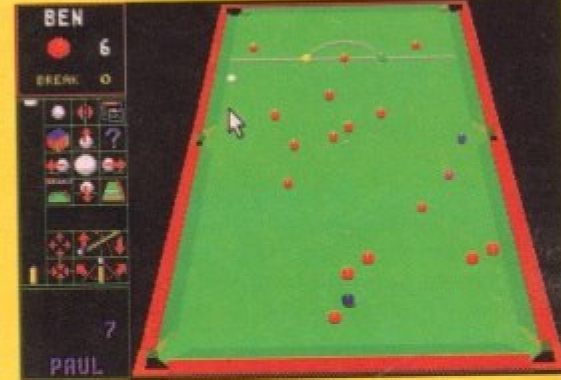
To help you with your shots you can put backspin or sidespin on the ball, to line you up for the succeeding shot.

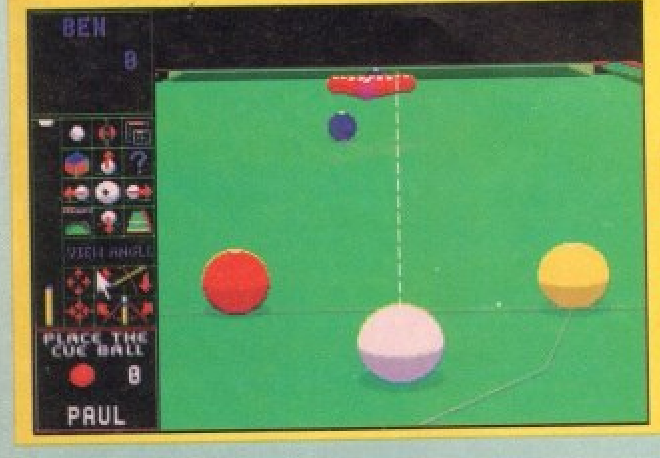
But if you are like me and you're happy to get the shot in the first place then you don't tend use this very often. Also, for the tricky shots which have quite a high angle there is speed controller to slow, add or subtract the speed of the shot.

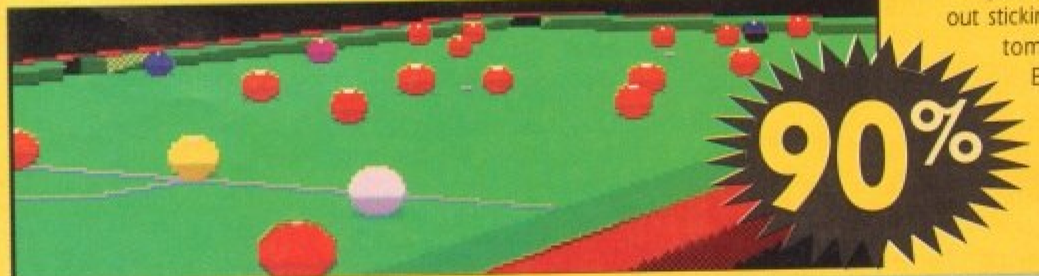
One thing that must be stressed about snooker is that it is a very easy game to play. It does sound a little complicated with all the different options but it has small prompts telling you what each icon stands for in case you get stuck.

There is also a good choice of opponents to choose from, ranging from the appalling to the extremely good, who knock off 147s like clockwork.

I would imagine that there are very few sports more difficult to simulate than snooker, and this has been proven more than once by the dire offerings endured. With its easy to use control, precise graphics and sheer realism though, JW's is as close to playing snooker you can get without sticking your bottom out at the British Legion.







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HiSoft BASIC

Following on from last month's CoverDisk giveaway of Hisoft's Basic, Paul Overaa starts a new beginners series on Basic programming

Just in case this is your first encounter with Basic here are a few fundamentals. A computer program is just a list of statements which specify actions that should be carried out by the computer.

The allowable arrangements of such statements are governed by a set of rules or syntax requirements which are not unlike the rules of grammar of a conventional spoken language such as English.

To learn how to program in Basic you must learn those rules but more than that you must learn how to put statements together in meaningful way. Basic is very forgiving in many respects – when it encounters statements that are incorrect you'll get error messages that should help you identify the cause of the problem.

As well as syntax rules, which must be followed, most programmers adopt additional program style and layout conventions – I'll outline my conventions as and when they are used.

The version of Basic provided on last month's CoverDisk uses a number of libraries which you'll find in the libs directory. You should make sure that copies of these libraries are present in whatever directory LIBS: is assigned to after boot up.

As far as using the HiSoft compiler/editor is concerned, most of the menu options will be self-explanatory – those that aren't you will not need to worry about yet. So double click on the HiSoft Basic icon, select Directory from the Project menu, enter RAM: (so that everything is done in the RAM disk) and make a start by typing in this one-line Basic program:

```
PRINT "Hello World"
```

Now select Run from the Program menu. A window will open and you'll see various messages as the compiler reads your program and converts it into runnable form.

If all goes well the last line displayed will be "Press any key". Hit say the space bar and a window will open, the words "Hello World" will appear and, since the running of the program is then complete, HiSoft Basic will again ask you to Press any key. At this point you will be returned to the editor. As far as compiling a Basic program goes that's virtually all there is to it!

The word Print is a Basic-reserved word that results in things being displayed on the screen and in this case the "things" being printed are the characters held between the double quotes.

Expressions like these are called string constants, because they represent pieces of text which do not change. Sometimes however a program will need places to store items that do change, so Basic also allows you to set up "variables" which are essentially named boxes in which you can place information.

Basic variables come in all sorts of shapes and sizes but the ones we are currently interested in are those used to hold text strings. They are characterised by having names which end in a dollar $ sign and, needless to say, they are called string variables!

Since HiSoft Basic's variable names can be of any length, you should aim to use names which tell you something about the quantity you are storing. If, for instance, you were collecting someone's name, you might use a variable called user_name$ (note that underscores can be used to improve legibility). This could then be used in exactly the same way as the equivalent string constant:

```
user_name$="John"
PRINT user_name$
```

In this case the first line of the program assigns the characters specified between the double quotes to the variable user_name$, and the second line of the program causes those contents to be printed. A more important way of initialising, or setting up, a variable is by collecting input from the user of the program.

Go back to the editor and either delete the existing lines, which you can do by going to the end of the program and repeatedly using the Delete key, by positioning the cursor somewhere on each program line and hitting Ctrl-Y (ie pressing the control and Y keys together) which deletes a whole line, or by selecting New from the Project Menu to clear the display.

Now enter and run this example which uses an Input statement to collect a user name and place it in a specified variable:

```
INPUT "What Is Your Name", user_name$
PRINT "Hello "; user_name$
```

When the program runs you'll see a message appear followed by a question mark. That's a prompt to enter some data so type in your name, press the Return key, and the program will say hello to you.

Basic doesn't force you to use separate lines for every statement. Multiple statements can be written on a single line as long as they are separated by colon signs, so one alternative way of writing the above code is:

```
INPUT "What Is Your Name", user_name$ :
PRINT "Hello "; user_name$
```

It's worth mentioning at this stage that HiSoft Basic doesn't worry about the case of reserved words although, by convention, I'll be writing reserved words in listings in upper case. AC

```
Workbench Screen
Compiled with HiSoft BASIC
What Is Your Name ? Paul
Hello Paul

Press any key
```

Simple beginnings – but everyone has to start somewhere!

Putting on the style

I mentioned programming style earlier and to finish this month there are a couple of points about my code which should be mentioned. Firstly, for reasons that will become clear when we look at larger programs, I try to avoid placing string constants within the main code of Basic programs.

By defining a set of string variables which hold any textual data that a program needs all the program text can be conveniently located in one place. For normal variables incidentally I always use lower case!

Secondly I tend to use lots of Basic REM statements – these are remarks, ignored by the compiler, that can be used to add additional notes to a Basic program. Any line that starts with the letters REM will be treated as a remark, so also will characters placed after a single apostrophe. Here's one last version of the program described earlier that should show you how additional remarks and conventions can help:

```
REM ----------------------------------
REM Program:   Example1.bas
REM ----------------------------------
REM Some static text...
START_PROMPT$ = "What Is Your Name "
HELLO_MESSAGE$ = "Hello "
REM ----------------------------------
REM main code...
PRINT START_PROMPT$;: INPUT user_name$
'get name
PRINT HELLO_MESSAGE$; user_name$
REM ----------------------------------
```

This month's commands

Command: Input

Syntax: `INPUT [;] ["prompt" {;|,}] variable_list`

Purpose: This statement prompts user for input and assigns it to the variable list. A comma after the prompt will suppress the appearance of a question mark. Placing a semicolon immediately after the Input statement will suppress CR-LF characters.

Command: Print

Syntax: `PRINT [variable1][{;|,} variable2]...`

Purpose: This statement prints to the screen the data defined in the list of variables (and/or expressions) provided.

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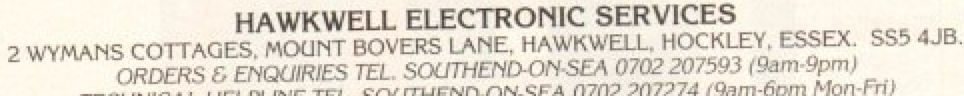
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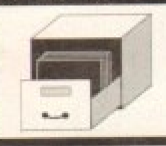
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amiga almanac

Nine pages of applications for the Amiga

Amiga

ARexx's power can be daunting to the uninitiated. Alex Gian shows that powerful need not mean difficult to utilise, and reaffirms ARexx's vital role in the modern-day productive Amiga

So far we've had a pretty good look at the Amiga's insides with ARexx, so this month, I will go back a bit and look at some of the basics again. I hope this will be useful to the increasing number of newcomers on the Amiga scene who are curious as to what ARexx is all about.

Don't worry, I'm not going to go over all the language details again, I only want to highlight, once more, some of the things that are possible with smart use of ARexx. I trust that this material will be just as interesting to those of you already familiar with the basics of ARexx.

A good way to look on ARexx is as a program enhancer, which allows programs to do much more than they would on their own. By adding its own impressive facilities to any existing package, ARexx lets you customise it in ways that could not possibly have been predicted by the program designers. You can think of ARexx-compatible applications as "fully programmable" programs!

This time we will look at just such a program, called MathVision, which serves as an excellent illustration of the "autopilot" capabilities of ARexx. The principles outlined here can just as easily be applied to any other similar software.

Visualisation

MathVision is a system for developing mathematical art, and allowing the visualisation of complex mathematical equations. It is based around a special mini-compiler which allows formulas to be entered interactively.

The formulas are then compiled instantly for super-fast execution, and their corresponding graphics are rendered on the screen.

MathVision has many outstanding abilities. It has several different plotting modes, including a very impressive shaded, light-sourced, 3D mode. It even features special hooks which allow C programmers to create new plotting methods.

MathVision can be used to generate beautiful and unusual fractal pictures. It can be used to demonstrate the evolution of mathematical models, their "morphing" if you like. This can be a valuable educational tool. We all know how much easier it is to understand a process if we see it happening right in front of our eyes.

There are many other uses for programs like MathVision – among other things it has been used to design prototypes of imaginative "wipes" for top-grade graphics applications. Basically, if a picture can be expressed mathematically, MathVision will probably be able to plot it.

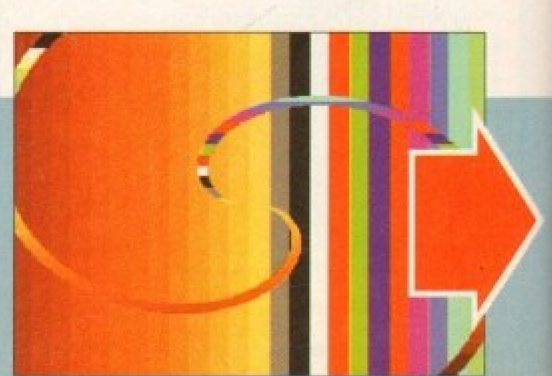
However, we will not focus on the multiple features of MathVision here, nor on the outstanding art it can produce, but rather we will look at its ARexx interface. The ARexx support that MathVision offers is fairly typical of a well-designed ARexx-compatible program, and should give you a good idea of what is possible.

What would we expect such a program to be able to do? Well, one of our very first requirements is that anything which can be achieved using the mouse or the keyboard must have an equivalent ARexx command. This includes menu options which present you with a requester when selected.

MathVision supports all its menu options via ARexx. Let me illustrate with a couple of typical examples. MathVision offers a menu option called Overplot, which allows new designs to be drawn on top of the existing ones. The instruction:

```
ADDRESS 'MathVision' 'Overplot T'
```

sends a command to Mathvision's ARexx port (called MathVision) which toggles this mode ON. Similarly, sending the command Overplot F to the port turns it OFF. Another example – the Modulo


Using ARexx to wipe from one picture to another

The ARexx Library

Calling all ARexx programmers...

If you've recently written an ARexx masterpiece and want the world to know about it, send it in to *AC*. Continuing to support ARexx is a high priority and as a result we are opening the *AC* ARexx Library.

This new source of ARexx software will be redistributed free of charge on the *AC* CoverDisk every month.

If you want to play your part in the ARexx explosion, send your scripts and additional programs to: *AC ARexx Library, Amiga Computing, Europa House, Adlington Park, Macclesfield, SK10 4NP*

on autopilot



Changing the function variables to create an impressive spiral animation

command determines how many colours the program will cycle through, for instance when doing contour plots.

When selected from the menu it pops up a slider bar which allows you to set the value. The same result can be achieved automatically with:

```
ADDRESS 'MathVision' 'Modulo' Var
```

where "Var" is any integer value (up to the maximum number of colours on the screen). The above are just two representative examples – a typical program will obviously have many options, and scores, if not hundreds, of ARexx commands.

One of the principal ways of using ARexx for script automation is to create a loop using the standard DO FOR ... END ARexx structures.

For example, you could create different views of a 3D picture, perhaps to combine them into a "fly-through" animation. At each iteration of the loop, the picture parameters are changed appropriately according to the ARexx program, and the results can be saved onto the hard disk.

The ARexx script can then execute automatically, in the background, leaving the programmer to get on with other things. Machines can also be set up to create several complicated time-consuming pictures overnight.

Has this got you interested yet? I certainly hope so, because the script automation facility of ARexx is definitely one of the best features of the Amiga as far as productivity work is concerned.

In fact, I have recently seen an ARexx program that allows the automating of software which does not even have an ARexx interface. Can you imagine DeluxePaint under ARexx control?

The second major ability of our program is that it can allow any of the program variables to come under ARexx control! We have already mentioned that MathVision is a mini-compiler. The user enters the source code as formulas on a number of predefined lines. The source code format is very concise, to allow for quick compilation, and slightly reminiscent of the LISP language.

The point is that variables in your actual function definitions can be shared with ARexx. This is not the same as before, where only the viewing parameters were changed. Here, the actual formulas that drive MathVision itself are changed from ARexx.

You can start your program with parameters for one particular function, and allow these to change over time to produce something different. It is this feature that allows the creation of "transforming" animations like those we have already mentioned.

Impressive wipes, flows and distortions can be produced easily, as you can see from the examples in this page. The possibilities go way beyond simple fractal construction and animation.

Professional graphics work can be generated up to the limits of the Amiga's resolutions. You could even use ARexx to connect and render data that you have collected externally (eg from your satellite receiving station). If MathVision is upgraded to take advantage of the new AGA chip machines it will be an outstanding piece of Amiga software.

I hope all this gives you a fair idea of what you can expect from ARexx compatible programs – after all one of the major factors in software development is the demands of the users!

● *Details of MathVision are available from Seven Seas Software, PO Box 1451, Port Townsend, WA 98368, USA. British distributors are currently being sought*

Extra goodies!

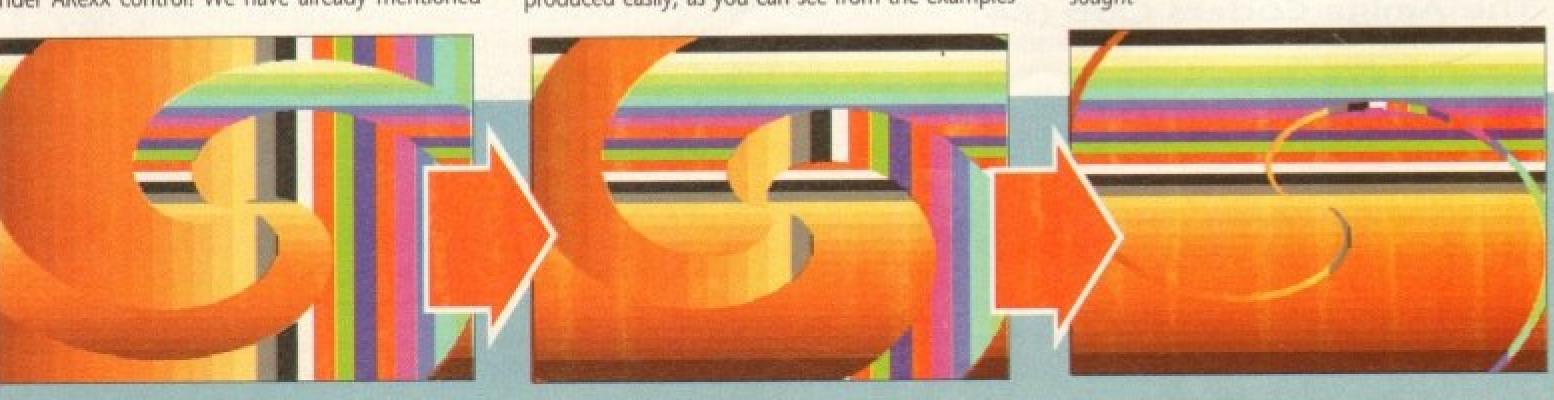
Finally, I'd like to point out that in addition to the ARexx compatibility mentioned so far, the MathVision package is provided with all sorts of other extra goodies, to make life with ARexx even easier. For me, little things like this make an enormous difference, and are the mark of a well thought out package:

A lot of ready-made ARexx scripts are provided, including one which allows you to do animations without needing to know anything about ARexx. Even ARexx programmers are happy to find that some work has already been done for them.

Other scripts include tests, samples and the like. There is even a nice little utility that launches your ARexx scripts from icons. If you are a little more ambitious you can take the code apart and customise it to your exact needs or develop your own programs.

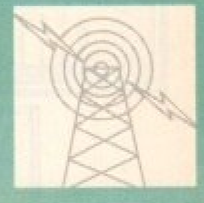
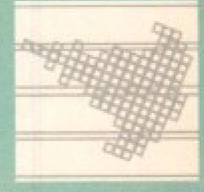
More generally, I have sometimes heard it said that ARexx interfaces are too difficult for the average user, and that they (the users) cannot be expected to know ARexx. This is nonsense really. Users who need highly specialised and customised automations would have had to use some kind of scripting facility anyway, so why not ARexx, which can do so much more besides?

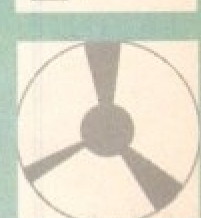
Otherwise, it's a bit like demanding to fly a jumbo jet, but not even being prepared to learn to drive a car!







Chroma concepts

Paul Austin – our answer to Scorcese – gets behind the camera with the first of a two-part examination of a breakthrough in Amiga desktop video

If you've spent any time at all perusing the pages of *AC* or indeed any popular Amiga magazine, the word genlock tends to pop up ever few pages.

These little electronic miracles are responsible for much of the Amiga's success as the ultimate DTV machine. Since the first basic – and dare I say it rather dodgy – genlocks appeared both the Amiga and it's ever-growing band of add-ons have come a long way.

To illustrate the point we can now add the final piece in the DTV jigsaw courtesy of Roctec and their latest release, RocKey. Although not the first chroma keyer, the RocKey is easily the most affordable and flexible unit yet to appear for the machine.

Before we start this is perhaps an ideal point to explain what a chroma keyer actually does and why people like me get so excited by the prospect.

In its most basic form, a chroma keyer produces an effect which in simple terms is a direct reversal of the effect offered by a genlock.

As you're probably aware, a genlock's primary function is to overlay Amiga graphics on top of live video. In the case of a chroma keyer the situation is reverse allowing you to overlay live video on top of Amiga-generated graphics.

Blue is key

Although hammered to death in the press, perhaps the most obvious example has to be the familiar "weather man" effect which miraculously places a suitably genial soul above an animated map of the UK and neighbouring Europe.

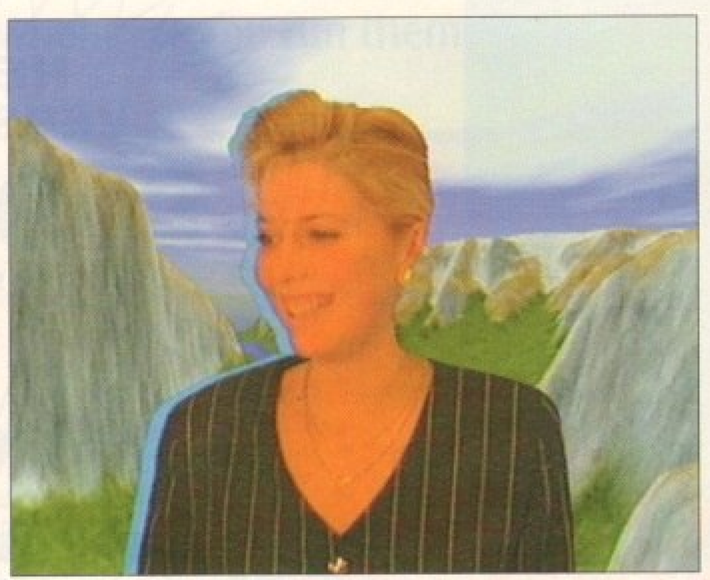
While you're happily digesting the details concerning your particular locale, the ever cheerful presenter is doing his or her best to guess where on a plain blue background your particular town is supposed to be.

The aforementioned blue background is the key – no pun intended – to the chroma keying process.

Just as a genlock uses a specific colour – usually colour 0 – a chroma keyer employs any occurrence of a specific pre-defined colour within the live video signal as its keying medium. Once equipped with all of the necessaries (see panel below) it's time to make the necessary connections and power up.

Actually wiring up all the various bits of hardware is slightly complex but nothing a little examination of the suggested setup diagrams can't soon clear up – although having said that this is just about the only area in which the RocKey's accompanying manual scores well.

Although friendly and approachable as technical manuals go, the RocKey variant is just a little thin on content. For example, there's no explanation as to what exactly what makes up the various effects.



The wide open spaces of the *AC* offices with the help of VistaPro and RocKey combination!

The only guide is a series of greyscale graphics which attempt to illustrate each effect and come accompanied by the necessary button selections to achieve them via the RocKey's control panel.

The unit itself consists of a fairly unassuming vanilla box about the size of an average hardback. The front of the unit is dominated by the three-colour control knobs which when activated by an accompanying button allow selection and adjustment of the desired keying colour.

For example, when keying onto a blue background, obviously the blue control button must be selected, but in addition both the green and red control knobs must also be adjusted in order to sharpen and polish the overall effect.

As well as the aforementioned colour selectors another four control buttons await including the essential chroma button which when left inactive allows normal operation of your genlock without disconnecting from the RocKey. Alongside chroma control awaits the splitter button which passes any one of the selected primary colours to the digitiser of your choice via the units splitter out on the rear of the unit.

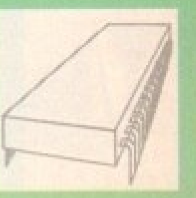
Below the chroma and splitter buttons sit the effects controls consisting of a toggled effects button plus an inverse option which operates in exactly the same way as a standard inverse on a normal genlock.

Alas that's all that space will allow at the moment but don't forget to tune in next month for a close look at all the effects and options this amazing little box can offer.

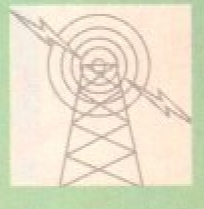
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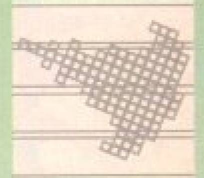


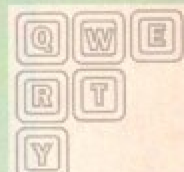


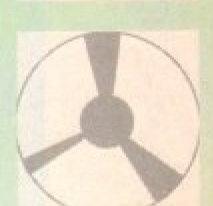












What you will need

Before we examine the unit itself there are a few essential bits of hardware that must be on hand before keying can commence.

The first of these is the aforementioned plain background. Any primary colour can be used, with blue being the ideal choice. In addition to the background the next essential is good lighting. For quality results the subject must be well illuminated on all sides.

The reason for such care during illumination is simply that uniform lighting and a complete absence of shadow is essential to maintain an acceptable effect.

If the chosen key colour varies, or shadows appear, the overlay effect soon becomes very patchy as areas of the backdrop begin to protrude through the Amiga-generated background graphic. As you can see from the illustration, a complete chroma keying setup is quite extensive but I'm afraid the lighting and backdrop are just the beginning as to operate the RocKey a standalone genlock is also required.

Obviously Roctec recommend their own RocGen Plus as the ideal choice but in reality almost any genlock will work with the system.

In addition to the above I strongly suggest the video source is supplied live from a camcorder rather than a VCR as the limitations of pre-recorded composite video does tend to degrade the effect quite dramatically.

Last but not least comes a good selection of RCA/phono connectors to make the necessary links between the RocKey, genlock, camcorder and target VCR/monitor.

Routine run-through

Over the past two months, Margaret Stanger has described C and assembler library routines. Here you can find out exactly what they are doing whenever you run them...

The last two programming pages introduced the Amiga Library, with routines that can be used in C and Assembler programs. C programmers passed the input parameters to the routine (as to any other function), and any result was returned.

Assembler programmers put the inputs in the appropriate registers, and called the routine as if it was a subroutine. Any return values came back in register D0.

The short demo programs opened the DOS library, for the Output() and Write() commands to write a message to the screen. The current demo programs use DOS library routines to read data from an Ascii file in the current directory, and write data to a similar file.

Two Exec library routines are needed to allocate a block of memory to store this data, and to free the memory afterwards for general use. AllocMem(bytesize,requirements) (D0,D1) puts by an area of memory; bytesize is the number of bytes wanted; requirements is the type of memory wanted. If the command is successful, a pointer to a block of memory is returned.

Multitasking

The memory block will be available for you, and not overwritten by another program when multitasking. FreeMem(memorypointer,bytesize) (A1,D0) frees the block of memory; memorypointer is a pointer to a block of allocated memory; bytesize is the number of bytes to be freed Open(name,mode) (D1,d2) opens the chosen file; name is the name of the file; mode is the access mode

A pointer to a filehandle or block of information for the file is returned (the system uses the block of information, when processing the file).

Read(filehandle,buffer,length) (D1,D2,D3) will read from a file – filehandle is its filehandle pointer; buffer is a pointer to the memory area to hold the data; length is the number of bytes to be read. The number of bytes successfully read is returned. Close(filehandle) (D1) closes the file – filehandle is its filehandle pointer

The main compiler (or assembler) header directory contains a subdirectory of header files for each library. These files contain useful macros and definitions for some of the library functions.

A header file can be included with any source code. The file exec/memory.h (C) or exec/memory.i (assembler) is included with the source code as it contains the memory requirement definitions for use with the AllocMem() command.

The program asks for memory that is public, clear but not necessarily chip. The file libraries/dos.h or libraries/dos.i is used for the access mode definitions when opening a file.

The file to be read (limerick) is opened using MODE_OLDFILE, which opens an existing file for reading or writing. The file to be written (limerick2) is opened using MODE_NEWFILE which will overwrite a file if it already exists, and open a new one otherwise.

When a file is opened for reading, information about the file is put into a parameter block in memory, called a filehandle, and a pointer to a FileHandle structure is returned.

Corresponding

When the file is first opened, the read/write position, or file pointer, will be at the beginning of the file. When a number of bytes of information are read or written, the file pointer will move a corresponding number of bytes.

If you do not want any other process to interfere with the file, you can open the file with access mode MODE_READWRITE. This access mode opens an existing file for reading or writing, but locks the file so that as long as it is open, no other process on the multitasking Amiga can access it.

It is also possible to lock files, without opening them for reading or writing. This can be especially useful for a file requester program, it can obtain a lock on all the available files and directories, and ensure that they remain undisturbed.

Assembler

The complete program source code listing (afiles.a) will be available on next month's support disk. The file "exec/types.i" has been included as it contains definitions used by

"libraries/dos.i"

and

"exec/memory.i".

Instead of having all the code in the main program, groups of commands have been built into separate subroutines. The main program checks the value returned from each subroutine to see whether the subroutine is successful.

If all is well the program can continue, otherwise it tidies up and exits gracefully. The cleanup routine closes any open files or libraries, and

The C and assembler demos

frees any allocated memory. It also calls a message subroutine, entering the routine with a pointer to the message data in register D2, and the length of the message in register D3.

The message subroutine only has to put the filehandle of the console in register D1, the address of the DOS library in A6, and call the Amiga library Write() routine to display the data on the screen.

When the object program (afiles) is run, the program opens the DOS library. If the library opens successfully, the program asks the Amiga to allocate a memory buffer for 152 bytes of data.

If the memory is forthcoming, the program can open a short Ascii text file (limerick) in the current directory, and read the text into the memory buffer. If the data has been read successfully, the program opens a new file, (limerick2), writes the text "This is a new file" into it, and then appends the text from the memory buffer.

The program writes the text from the buffer to the screen, and waits for a few seconds. The program can then display a message of success on the screen, tidy up, and exit.

The C program

The disk will contain the program source code listing (files.c) and the object code (files). The source code includes "libraries/dos.h" and "exec/memory.h" for some of its definitions.

Some of the commands have been grouped into functions which are called from the main program. The functions are listed separately after the main program but their prototypes are declared earlier.

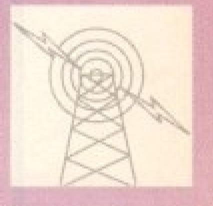
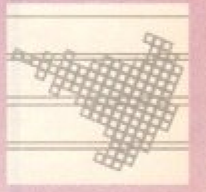
The main program is then aware of the name of each function and the datatype of its return value. The cleanup function has a parameter passed to it, a pointer to a string of text.

The function displays the text on the screen then tidies up the files, libraries and allocated memory. The main program can call this function with a suitable message for all occasions.

When the object program (files) is run, the program opens the library, and allocates a memory buffer. The short text file is read into the buffer, and the contents displayed on the screen. After a short delay a text message and the buffer contents are written to the limerick2 file, and the program tidies itself up and exits.








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Composition corner

Paul Austin provides a potted guide to song construction for the new muso

Although modern music has been revolutionised by the computer and sequencer combination, as ever there's a price to be paid for the added convenience.

Alas the price in question all too often remains unnoticed by the novice, resulting in the inevitable transformation of inspired ideas into a bland finished product.

The problem is caused by the very convenience that the sequencing explosion has brought about. All too often roles are reversed between man and machine as the human element mutates into the automation of the machine.

As the sequencing carrot of "cut and paste" dangles ever more invitingly before the eyes of the beginner, the creative spirit slowly erodes.

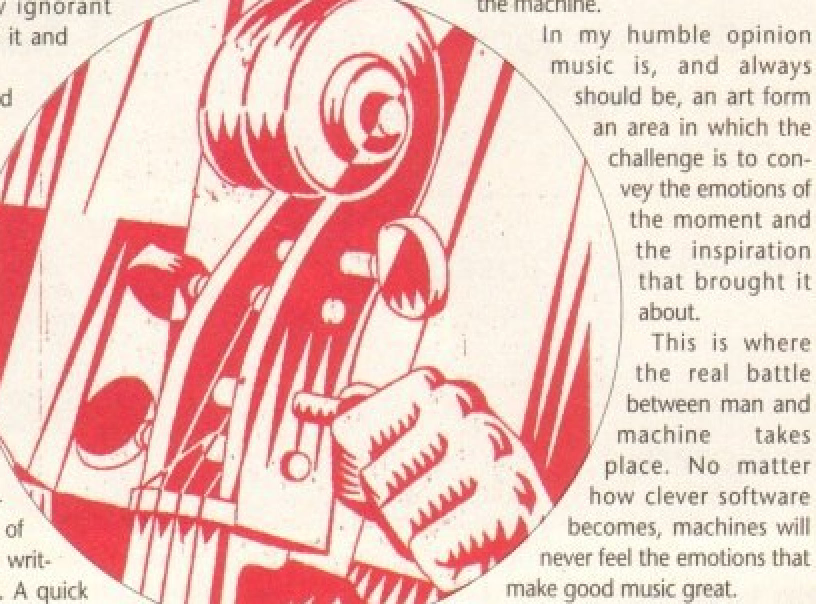
By default, machines always lean towards uniformity. However, this adhesion to rules and formal structure can also happen to humans very easily.

Ingrained

A prime example are the many classically trained musicians, who although technically spectacular in their implementation, seem to have lost the creative flame thanks to the musical structure ingrained during the learning process.

After many years as part of the Transit van set, among a mixture of the classically trained and the self-taught, this insistence on structure soon becomes blindingly obvious during the inevitable end of practice jam.

Invariably in the starring role during pre-written material the classical elements usual sink into the background during the free-form of a jam session. The question is – why should the best musicians in the room pale so badly in such circumstances? The answer is simple – rigid musical thought always looks for the correct way to progress, rather than the inspired route chosen the blissfully ignorant members of the "suck it and see fraternity".



While emotion and good old guess work drives the self-taught from one chord progression to the next, the classically trained are busy looking for the right approach, rather than the inspired.

The end result is that the classically trained are usually happier playing the works of a composer rather than writing their own material. A quick glance at the popular – and not so popular – charts stands as a glowing testament to that.

A similar problem afflicts a lot of computer generated music as the uniformity and adhesion to a format means the inspired and accidental is often absorbed by the constriction of the "cut and paste".

As a result, the battle against blandness has to be fought almost every time you turn on the machine.

In my humble opinion music is, and always should be, an art form an area in which the challenge is to convey the emotions of the moment and the inspiration that brought it about.

This is where the real battle between man and machine takes place. No matter how clever software becomes, machines will never feel the emotions that make good music great.

It's true that hours and sometimes days can be saved by sequencing but in order to create anything other than lift music you must remain the master and not simply the slave of the machine.



Tints and hips

OK, after insulting almost everyone who's ever played an instrument – electronic or otherwise – it's time for Austin's patented guide to popular music.

The first job is to throw away any preconceptions that the machine will in some way write the music for you. As a result, before even touching the record button, it's wise to have a firm – or at least firmish – idea of how the piece will appear in its final form.

At this point yet another technological fantasy can hit the bricks, namely the paperless environment. A decent pen is just as important as any part of you setup, and during the planning stage it's vital.

Assuming you're now armed with pen and paper it's time to turn on your synth, select your favourite voice and start work on the hook or key melody.

Depending on your prowess on the ivories, or should I say plasticies, this can be as simple or complex as you wish.

Now before an increasingly itchy finger hits for record, write down the key notes or chords and start looking for a link to the next section of the song whether it be a verse, chorus, middle eight, intro, outtro or anything else that tickles a particular fancy.

It's very important that the various elements flow together prior to recording individual sections. All too often if you simply charge headlong into a piece thereby creating finished individual sections before contemplating what will follow, the end results will suffer as you attempt to join two basically incompatible elements together.

Once all the basics are in place you can finally begin the recording process. If you're wrestling with the eternal question "is this a classic or just a load of cobblers?" , a top tip is to have an early night and return refreshed in the morning.

If in the cold light of day you can't remember a single note I'm afraid your worst suspicions are probably correct and your would-be masterpiece is indeed crap!

Assuming that you've remembered every note, the construction process can begin. There are basically two routes available. You can select the required instruments and work on the piece section by section and then subsequently assemble the finished product.

To be honest this is probably the fastest way to work but again it doesn't lend itself to accidental inspiration that easily.

The second option is to build the entire piece using the basic key notes as a guide with perhaps a metronome as an additional guide.

If at all possible avoid designing the drum track until the major chords, bass lines and accompaniment are in place.

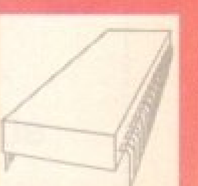
This isn't because the drums are any less important than the rest of the production – in fact quite the reverse. If there's one element of sequencer-generated music that suffers from the "cut and paste" more than any other it's the drum track

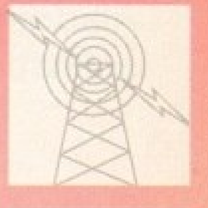
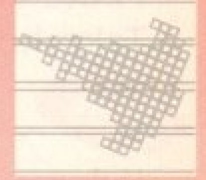
Due to the uniform nature of drums and percussion they're the first to fall foul of blanditis. If they're left until later in the production the accompanying music isn't forced to pander to an invariably monotonous cut and paste drum special.

Equally important is the fact that adding the drums and percussion later means you're forced to think more along the lines of a real drummer and attempt to tailor the drums to the track rather than the reverse.

Well, alas that's all that space will allow, so I'm afraid I'll have to curtail this particular rant for the time being. Feel free to send all hate mail to me at the usual address...








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E-tiquette!

Contacting other users is much more fun than merely downloading PD from BBSs, but what are the rules? Here's Pat Winstanley's crash course on E-mail and manners...

Although many people initially get hold of a modem in order to grab PD software easily, there is another, much larger, side to using a BBS. This is called Echomail, or E-mail

Just like the letters pages of magazines, virtually every BBS has at least one area where users can write to each other about almost anything.

With the implications of a free-for-all, and high phone bills trying to sort out messages of interest, came the need to create different areas for different subjects.

Areas created for different subjects are known as "echoes", and exist for virtually every topic of conversation you can imagine. Some are computer related, while others ban all mention of computers at all.

A system of etiquette has grown with the echoes, and while the various rules of behaviour may differ slightly from one echo to another, there are some general points common to all.

The most important is the necessity to stay "on-topic". What this means is that you should try to keep to the subject matter that defines a particular echo.

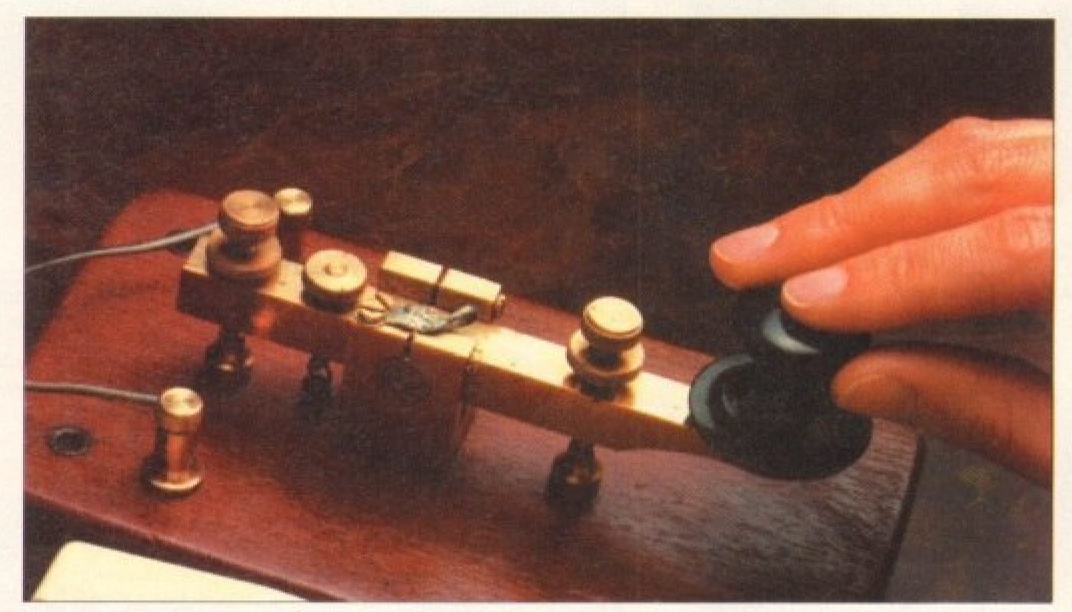
After all, if you join an echo dedicated to information on modem settings you don't really want to read a stream of messages about someone's cat. Or if you do want to read about cats, all you need do is find an echo where they are the correct topic.

Personal

Another rule to remember is that of "general interest". There is a system of private messaging called Netmail where this is appropriate and caters for users who want to chat about personal concerns (meeting up for a drink perhaps) and such chat should be kept out of the more open echoes most of the time.

If you are reading and replying to messages on-line, it's very tempting to skim through, perhaps not reading the full message. Misunderstandings are legion when this happens, as it's very easy to assume someone means the exact opposite of what they actually typed.

And in the same vein, while trying to type quickly you are likely to express yourself a little ambiguously at times. When this happens, and either the reader or writer gets the wrong end of the stick, what are known as "flame wars" can easily break out.



An angry response, whether justified or not, can set a whole "thread" of messages off, with both sides convinced they are right! The golden rule here is to sit back and think for a moment if something is apparently offensive to you. Then read the message again before replying.

Another problem with messages is that it's very hard to show when you're teasing, or typing something tongue in cheek. To help with this a system has developed called "smileys".

These are little sets of typed characters which attempt to graphically show what sort of mood the writer of a message intends.

For instance, if I wanted to show that I had a big grin while typing a reply, as the other person's message had amused me, I'd end the sentence with a symbol like this :-)

If you lean your head to the left you can see two eyes, a nose and a big smile. There are lots of variations on this simple symbol ranging from winks to full-blown beards and bow ties.

Reading and writing on-line does eat into your phone bill so some short-cuts have been developed to save time and space.

One of the commonest is ROFL which stands for "rolls on the floor laughing" and is commonly used to reply to messages which make you do just that. If you come across one and can't work it out, just ask in a reply what it means. You'll probably end up with half a dozen or so messages back giving the translation. Some other common acronyms are:

BICBW - But I could be wrong
IMHO - In my humble opinion
IOW - In other words
ISTM - it seems to me
FAQ - Frequently asked question

As mentioned, all the above rules are available to the people who run the echoes, and each echo has its own set, laid down by the moderator.

The moderator looks after the day to day running of his or her particular echo, and posts a message containing their interpretation of the rules at, usually, monthly intervals so that all users know where they stand.

Take the time to read these rules as they will give you an insight into the style of a particular echo, and help you use it wisely.

If you fancy having a good row there are echoes which cater for that, and they can be great fun indeed, but try not to shout your mouth off in echoes which are not designed for it. Oh yes, do try not to swear or use other offensive language.

Lots of youngsters read the echoes over mum or dad's shoulder, and many adults too dislike being faced with a stream of verbal abuse.

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or as Pat Winstanley on Fidonet at
2:250/107.99

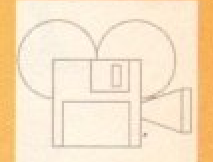
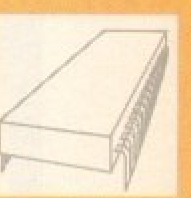
A universal language

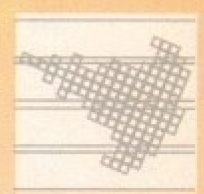
Because all types of computer can connect to BBSs, some conventions have grown up as to the types of characters which messages may contain. This is generally the basic Ascii set, and you should avoid inserting control codes in case they send another user's computer totally loopy!

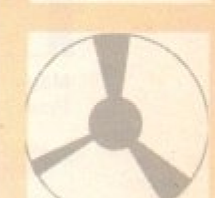
However, this isn't as much of a constraint as it might appear, and the Ascii characters are often used by imaginative users to create little graphics which decorate their messages.

These are known as "signatures" and aren't always little. Some users create masterpieces of Ascii art which can take up an entire screen.

However, this is generally frowned upon as it adds tremendously to other user's costs, and three or four lines worth seems to be the accepted average.

Vacillating vectors

Phil South mulls over the subject of vectors. What are they? Where are they going? And at what angle

Moving sprites on the screen is a pain in the bum, and no mistake. First you have to get the damn things moving and then you've got to hold their hand every step along the way, seeing what they hit, and then deciding how to bounce off or explode depending on what the object you've hit is. It's like having kids, or something.

Wouldn't it be so much nicer if you could just send an object off in a certain direction and not worry about it until it actually does hit something? Well, you can. But first a bit of maths (groan). No, don't turn the page. Maths is a good thing. Keep that thought in mind and you'll last a lot longer as a programmer!

Vectors are a method of moving objects around quickly and simply, with no complex calculations or faffing about.

They should be thought of as a change of direction of an object (or point in space), rather than the usual way of moving objects which is manually hoiking them about using INC, DEC or things like X=X+1.

It's the difference between picking a toy car up in the air and putting in manually in another place (the old method) and pushing it along the ground and letting go (like vectors).

In Amos terms it works like this. As usual you use the standard pair of variables to hold the X and Y co-ords of the sprite or bob position. So for example this is the vector demo program:

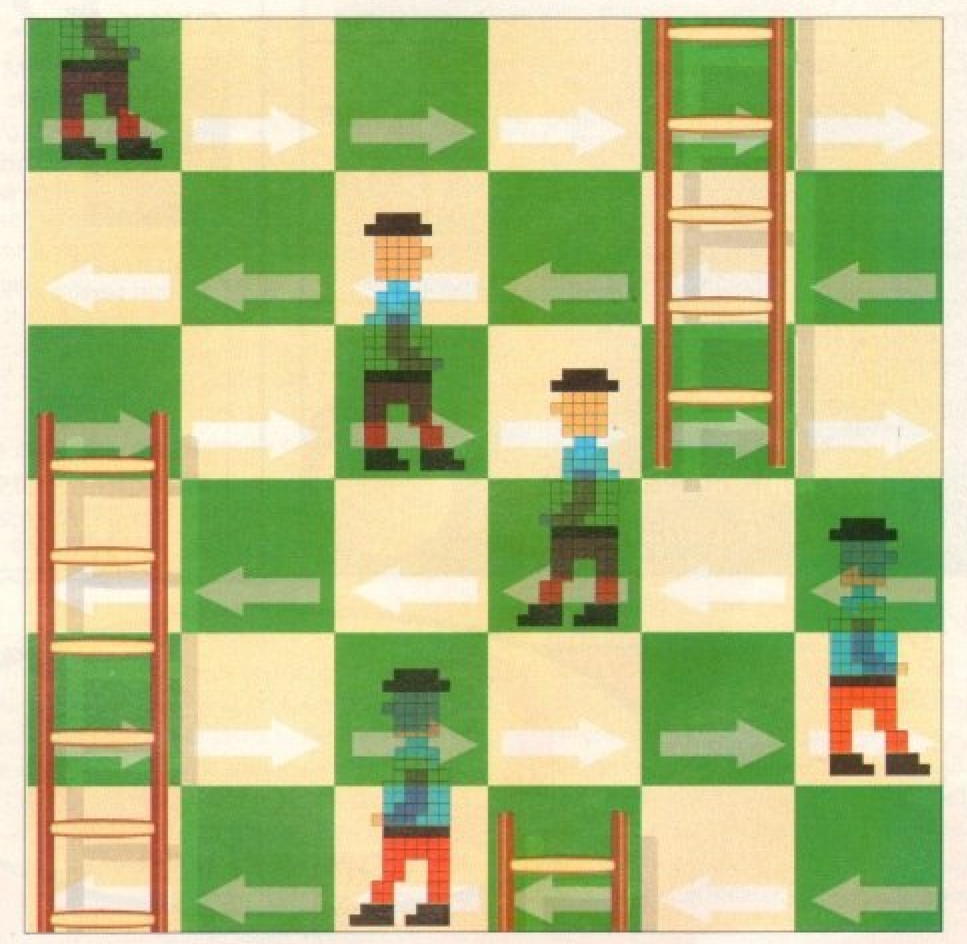
```
Curs Off : Hide : Flash Off : Cls 0 : Ink 4,4 : Paper
0
Input "What X ";DX#
Input "What Y ";DY#
```

It's traditional to use the variables DX and DY, as they will tell anyone reading your program that these are vectors. If your vectors are designed to use an FPU (floating point unit), then append them with a hash or # symbol.

In this demo program you start by inputting the x and y direction vectors – this has an effect on the direction that the sprite will go. It's best to try a range of numbers between -8 and 8 for each of the vectors. First the vectors you require are accepted through the input command and stored in two variables called DX and DY:

```
Cls 0 : Bar 0,0 To 5,5
Get Bob 1,0,0 To 6,6
Cls 0
```

The Bob used in the program is grabbed from the screen using Get Bob, having first been placed there using a Bar command. This is a good way of making simple sprites without having to mess about with sprite editors or anything silly like that.



Next we want to talk about X and Y, which in this case are floating point numbers so they are appended with #:

```
X#=160 : Y#=100
```

Then the start position of the bob is set to X=160 and Y=100, or slap dab in the middle of the screen, as the screen we are looking at 320 by 200:

```
While X#>0 and X#<320 and Y#<0 and Y#>200
    Bob 1,X#,Y#,1
    Wait Vbl
    X#=X#+DX#
    Y#=Y#+DY#
Wend
End
```

The While Wend loop moves the sprite in the direction given by the vectors. After a while of running this program you'll be able to predict the precise direction.

The Bob is moved until it reaches the edge of the screen, either less than screen position 0 at the top or left of the screen, or screen position 320 or 200 to the right or bottom.

Each time the While Wend goes around, the DX and DY vectors are added to the current co-ordinates, affecting the direction of the sprite. The DY and DX vectors can be positive or negative, and the speed of the movement can be varied too.

You can put random speeds and random directions into a sprite making it possible to simulate the bouncing of a ball in a ping pong or squash game, or you can even simulate gravity, if you have the right formulae.

This is a very cool and efficient way of shifting objects around, and with a little bit of experimentation you can create very realistic movements for your sprites with very small code.

A lot of Aaron Fothergill's ten-liners (Amos games written in just ten lines of code!) use vectors to chop down the amount of code needed to do very intelligent things. If you haven't seen any of these disks, then join the Amos Club right away!

Why aren't you a member? If you're into Amos you must join the club. Write for details to Amos Club, 1 Lower Moor, Whiddon Valley, Barnstaple EX32 8NW.

Keeping you busy

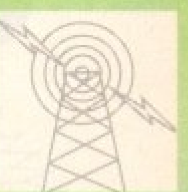
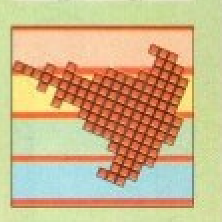
You can even do vectors in 3D, but this is more complex (worth looking in to though!). Obviously you have facilities at your disposal in Amos 3D to translate objects in 3D, but a little bit of vector magic wouldn't hurt for some really special effects.

The whole point is that vector riffs are small compared to those really big routines which you can end up with when you try to do this stuff by hand.

● If you have an Amos question, then please write to Phil South, Amos Column, Amiga Computing, Europa House, Adlington Park, Macclesfield, SK10 4NP.








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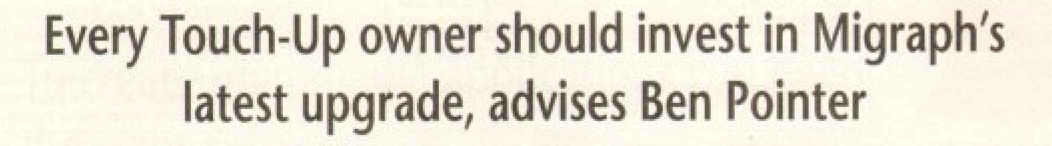
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Feeling better



Every Touch-Up owner should invest in Migraph's latest upgrade, advises Ben Pointer

The canny British Amiga users appear to have an instinctive fear of software upgrades. Having paid once for the software, many users don't see why they should have to pay again.

Well, yes, there are times when an upgrade isn't all it's cracked up to be. But saying no to every upgrade that comes along can often mean missing out something special. The latest version of the Touch-Up hand scanning software is a classic example.

Touch-Up is the software provided with the AlfaScan and Golden Image hand scanners. Early versions were ugly, buggy and slooooow. Version 2 fixed most of the bugs, v2.5 saw more improvements including a 256 greyscale Save option. Now comes v3.02, which has been completely re-written.

My two big gripes with earlier incarnations of Touch-Up were its poor greyscale conversions and the lack of a real-time scan. No real-time scanning meant that if you got the brightness wheel setting wrong you had to wait until you'd finished the whole scan to find out.

Real-time scanning means you can see what's coming out of the scanner – you can twiddle the brightness knob and see the results straight away.

Blurry

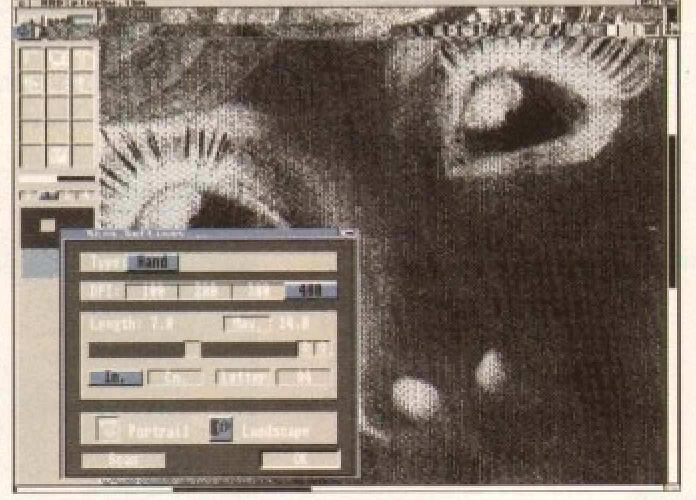
The problem with the greyscales was possibly subjective – my opinion, in other words. Migraph, makers of Touch-Up, couldn't see much wrong with them. But when you put them up against scans from rival scanners, the Touch-Up scans always appeared dark and a bit blurry on-screen.

There was one other private gripe I held, and that was that Touch-Up didn't look and feel much like an Amiga program. I'm happy to say that this latest version is one of the most eye-pleasing pieces of Amiga software I have used.

Touch-Up will open on the Workbench screen or its own custom screen. The custom screen can be any size you like – so it can be an overscanned interlaced one for example – and you have the choice of running in two colours to save memory, or four colours if you want a pretty interface.

If you specify Tool Types figures for Width and Height that are greater than the screen's physical dimensions, then with Workbench 2 and above the autoscroll feature comes into play whereby moving the pointer to the edge of the physical screen quickly scrolls the actual screen in that direction. So it's possible for example, if you have the memory, to have a 2,400 pixel by 3,300 pixel screen which can display what is an 8in by 11in area when scanning and printing at 300dpi.

If you open a regular sized screen – 640 by 512 say – then you can still have a larger "page" size, but you will have to scroll around this page using the locator tool or the window's scroll bars.



The new Landscape option means you can scan sideways and Touch-Up will automatically rotate the scan upright

Touch-Up now does a real-time scan, which can be switched off by a Tool Type if you don't like real-time scanning. To conserve memory and aid speed the program opens a two-colour 320 by 200 pixel screen for this real-time display.

For line art scans Touch-Up has some useful processing facilities. The Bold option enables you to automatically add black pixels to the black parts of the scan in the horizontal and/or vertical directions.

Cleanup will remove isolated black pixels, white pixels, or both. The Outline feature is fun – it removes the inside of black lines, making them hollow as it were, which means that they can be filled with a pattern.

Touch-Up can rotate clip areas to any angle in 0.1 degree steps, and it can also slant or "shear" clips horizontally and vertically. As well as being able to flip clip areas horizontally and vertically, which any scanning software can do, Touch-Up can mirror an image to the left, right, above or below the clip, which makes it easy to create "tiled" images or fancy borders, for example.

Greyscales can be saved in three formats – 16-colour IFF-ILBM, 256-colour TIFF or 24-bit IFF-ILBM. Despite the impression given by the adverts, the latter two formats contain only 64 shades of grey because they have been scanned with a 64 greyscales hand scanner.

These images can't be viewed on (dare I say it) an old Amiga – Amiga 1200 or 4000 owners should be able to view the 24-bit IFF-ILBM images. All three greyscale formats can be imported and printed by PageStream – Professional Page can handle the 24-bit and 16 colour IFF-ILBMs. PageSetter II and all of the graphical wordprocessors can take the 16 colour IFF-ILBMs.

The quality of Touch-Up's 16 greyscale images is much improved. While they may look a little fuzzy on-screen, the printouts, when scaled down to increase the output resolution, and especially when using a printing package like TurboPrint Professional, now almost always look better than the same picture scanned with rival scanners.

Conclusion

Migraph has been working hard on Touch-Up. It has come a very long way since v1.0. In the Scan Setting requester there is now an option that reads "Type: Hand" which gives the impression that flatbed scanner support is perhaps on the way, and very possibly colour flatbed scanner at that.

You may not be interested in this, I'm merely pointing out that further development is still very much on the cards, which can only be a good thing. At £20 to £30, this major upgrade is well worth the money.



Scanned and converted to 16 greys by Touch-Up v3.02

Touch-Up will save 16-greyscale IFF images, which are much improved and handy for screen work, or 256-greyscale IFF or TIFF which are better for DTP

Touch-Up 3.02 upgrade

From v1.x £29.95
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Tools of the trade

To create multimedia applications you need the right software. Julius Alexander looks at two ideal packages

Last month we looked at some of the tools that can be used to create multimedia and CD-ROM applications. This month, I'm continuing with a more in depth look at two of the easier to use development packages that are now available, AmigaVision and Scala.

When Commodore originally released the A3000, their then top of the range Amiga, they gave away AmigaVision as an easy to use, multimedia authoring tool.

It is certainly easy to use, working by placing icons on a grid through which the program flows. Each icon represents an individual action such as playing sound and speech, showing pictures/animations and controlling external devices such as laser disks.

Branches

There is also the facility to control the flow of the program through the "branches", ie rather than just following a series of steps your program can have two different routes and is able to chose which one to take depending on the state of a variable.

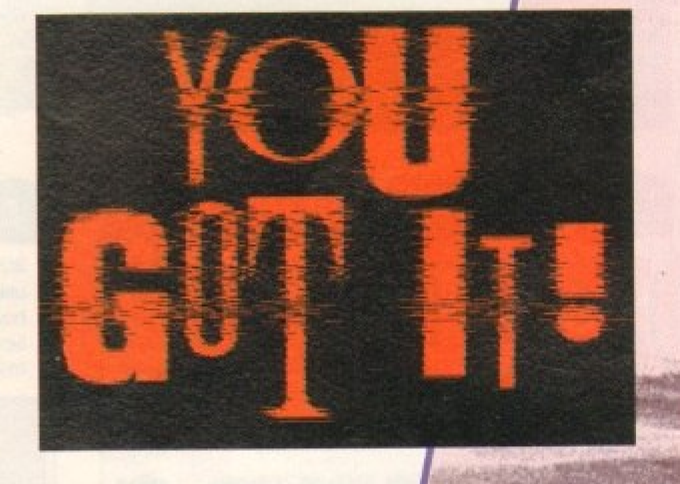
Given these capabilities, AmigaVision can be used to create some impressive multimedia applications with support for a wide range of hardware peripheral input and replay most types of Amiga data.

Unfortunately it has two serious problems. Firstly, there is no way in which you can create a program that doesn't need AmigaVision to be used, otherwise known as a run time module.

Secondly, it swallows memory like a vampire brain surgeon. One megabyte is needed simply to load the program! Still if you can live with these shortfalls, AmigaVision is recommended for its easy of use and peripheral control.

A rival to AmigaVision for ease of use and power is Scala. Originally available in one version, Scala is now in two forms – the original Scala, called Scala 500 and its big brother, Scala MM (for multimedia).

Due to limitations of space, I'll be looking at Scala MM in a future issue and confine my scriblings just to Scala for this month.



The program itself set the benchmarks for ease of use when it first appeared, allowing presentations to be created ridiculously easily. Originally developed for creating presentations, Scala can also be used for simple applications.

Associations

It works by creating scripts, each script is a list of pages and the associations between these pages. Each page consists of an IFF backdrop onto which you place text, and brushes. Text can be in any standard Amiga bitmap font each of which can have numerous different text attributes applied (bold, drop shadow etc) and there are a number of very high quality fonts supplied.

Helping to break the monotony of static text, there are roughly 50 text effects that can be used to scroll, fades and drop into place. Switching between different pages is facilitated by buttons, clicking on which will take the user to a different page.

Each page can be simply displayed on the screen or introduced through a transition. These consist of fades, scrolls and wipes and are fast, even on the lower end Amigas.

Its major failing is that it lacks proper CD-ROM support, with no CD audio or CDXL playing capabilities. If however, your application consists of just screens it's worth a look.

Next month I'll be looking at some recent developments in the field of Amiga multimedia and ask where is it all going?



Are CDTV pictures about to start moving?

As I finish this column, word reaches me of some interesting developments on the FMV front. Word is probably already creeping through about a new CDTV. What form this will take is unknown, but associates tell me that it will include full screen FMV. How you may ask?

The answer comes from a new compression format known as MPEG. This format reduces the space required to store moving pictures. Why should a strangely named what-d'ya-call-it affect CDTV and FMV?

To explain, moving pictures are made up of a number of still frames displayed one after another, each changing slightly. The result is a moving picture. Each CDTV full screen occupies a fixed amount of space, so to display even a half decent moving picture the CDTV would need to display 16 of these a second (the more the better) and thus need to transfer 16 times this amount of data every second from the CD disc - and we all know how slow CDs are at loading. Currently it simply doesn't have the speed.

However, reduce the amount of data to be transferred (ie compress the data while it loads and then uncompress it once it has loaded) and the transfer speed suddenly becomes a smaller (compressed?) problem.

Unfortunately the technology hasn't be available to uncompress these images quickly enough. Until now that is. Several American companies are now producing chips that do exactly this, and Commodore should be able to incorporate this into the next CDTVs – and hopefully, produce an update card for existing units!

This isn't expected to happen for a while, but sources tell me we should expect to see something appearing mid-summer '93! As they say, watch this space!

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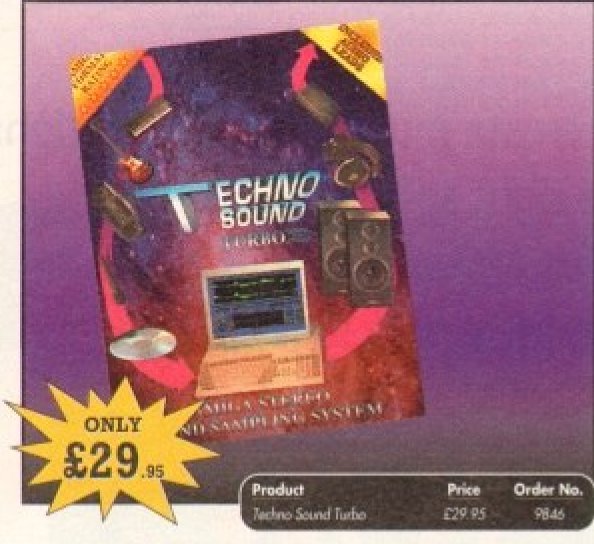


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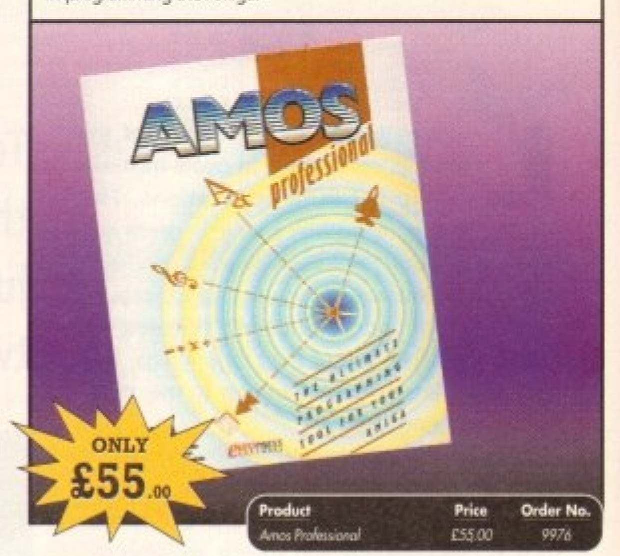


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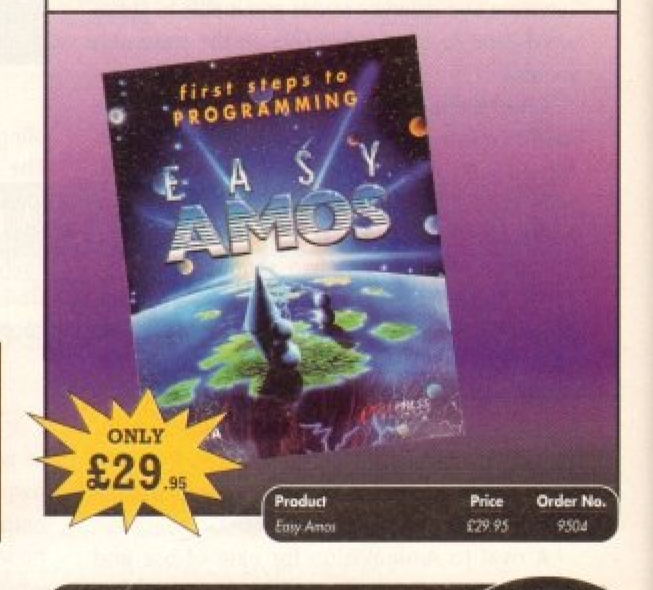
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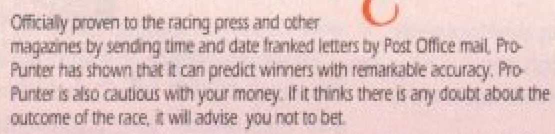


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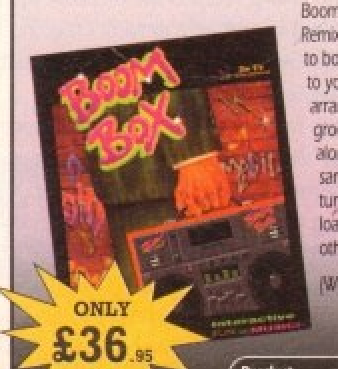
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NEW Offer

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(Workbench 1.3 or 2.0 required)

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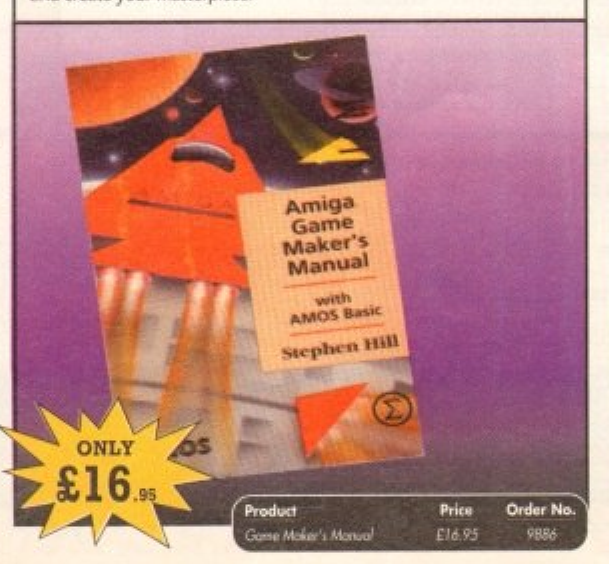


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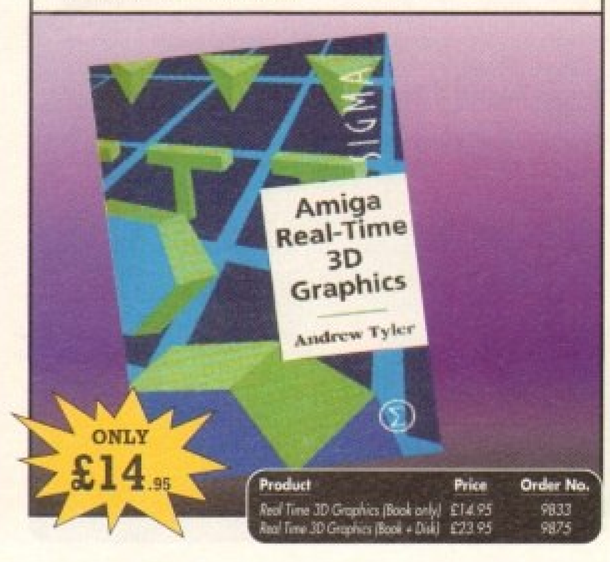


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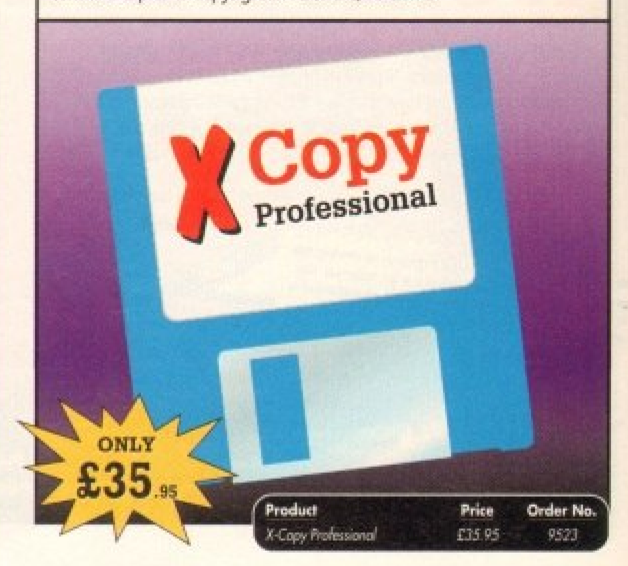


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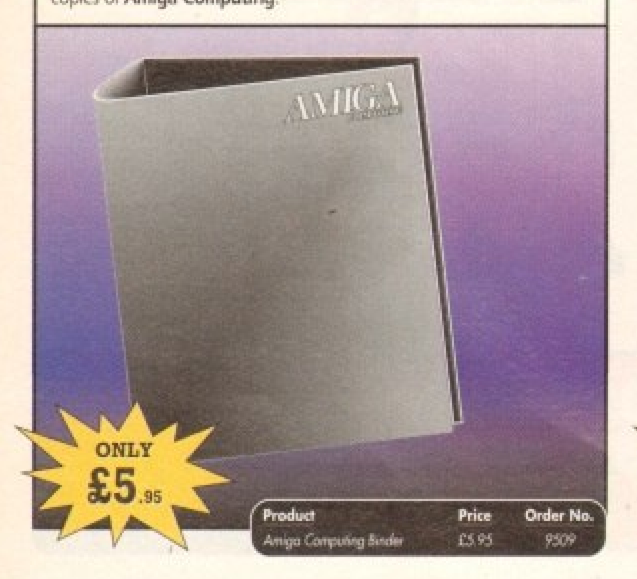


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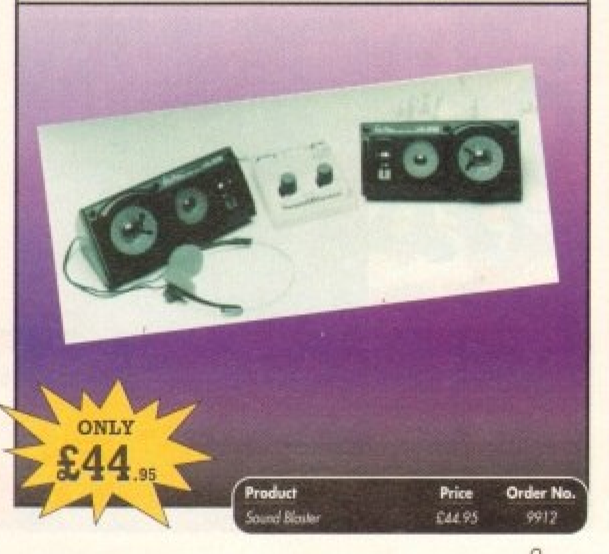


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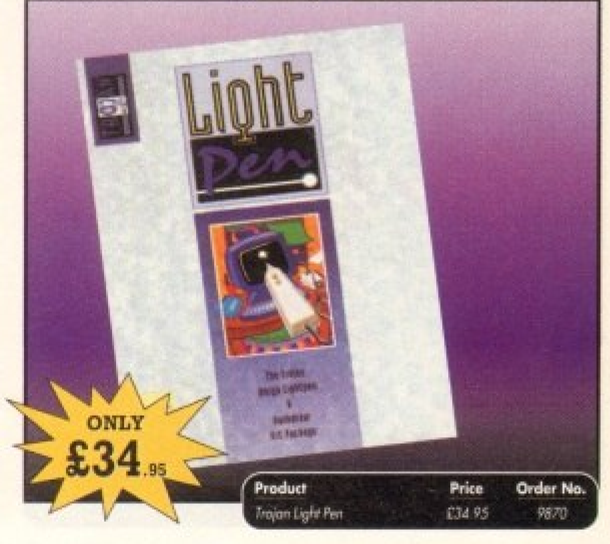


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The hard road to HDs

A1200 owners with hard drive hopes are experiencing another Commodore comedy of errors. Why?

When A600 owners realised that Commodore were serious about refusing to support third-party add-ons, many of them when attempting to upgrade their machines with a hard drive were left confused and at the mercy of dodgy dealers. Contradictory information and lost warranties were the only concrete results.

Commodore, one might not unreasonably expect, would have learned from this painful (for the punters at least) lesson and predicted the massive demand for hard drives from the more serious A1200 market.

However, to the astonishment of all but the most hardened Commodore cynics, the A1200 was released in a floppy drive-only format with no firm date for the appearance of the HD version.

To add chaos to disappointment, no HD install disk was included with the A1200 Workbench 3.0 disks, despite the fact that the A4000 install disk works perfectly with its little brother.

Users were therefore unable to buy and fit their own hard drives, and were once again left at the mercy of third-party companies who, predictably, have been supplying pre-formatted HDs.

The problem with this sort of product is that the hard drive is usually prepped and formatted using Commodore's install disk, a process over which a legal question hangs.

If only one install disk is purchased by the retailer, shouldn't it be used to prep just one drive, or one user's collection of drives?

Adding mud to the already murky waters is the warranty question. Most dealers who presently fit hard drives for end users will guarantee the drive mechanism but are not prepared to replace the Commodore 12month on-site warranty which is such a selling point for the new machines.

Users who have a drive fitted in this manner or who fit one themselves are thus running the risk of paying large sums to have their machine repaired if, say, a chip blows inside the first year.

Commodore's attitude to this has been predictably muted. The A1200 is a closed architecture machine, users are not encouraged to open them, and if they do the warnings are obvious enough that they should be prepared for the consequences.

Fair enough, but when Commodore's inability to take the simple step of releasing a hard drive version of the A1200 from the outset has been the prime factor in forcing users to risk their warranties in the first place, this sort of defence is wholly inadequate.

The existence of an official upgrade path would have covered Commodore's back, but when no HD version is available and no official upgrade is planned for the immediate future, enthusiast and productivity users of the A1200 can hardly be blamed for taking the third-party path.

In this light, Commodore's attitude now seems a little high-handed, doesn't it?

At long last, an HD policy of a sort seems to be on the way. For some strange reason, Commodore are reported to have struck a deal with major official Commodore distributors whereby Commodore supply the install disks, manuals, and cables, and the distributors add a hard drive.

The A1200 is then prepped and formatted by the distributor and sold as an official Commodore A1200HD complete with on-site warranty.

Duplicate hard drive mechanisms are shipped to Wang from the dealers to ensure that Wang have units with which to replace any hard drives which go wrong, but if and how a standard hard drive mechanism is to be decided on is not known.

Though infinitely better than nothing, the question still remains – why didn't Commodore do this from the outset and why don't they now do it for themselves?

Why leave everything to third-party distributors in a move which goes against everything Commodore have done over the past decade?

No Commodore spokesperson was available to answer any of these question as we went to press. Kelly Sumner (managing director) was out of the country, Andrew Ball (public relations) has left the company and is still to be replaced, and Quentin Bell (Commodore's PR agency) were able only to confirm that the plan was to go ahead.

What Commodore will do next and why they have abandoned traditional Commodore policy will remain a mystery.

One thing is clear. Existing A1200 owners should not hold their breath for official upgrades. New A1200s will be shipped in HD versions eventually, but an official hard drive upgrade with warranty still seems as far away as Commodore's sun-loving MD.

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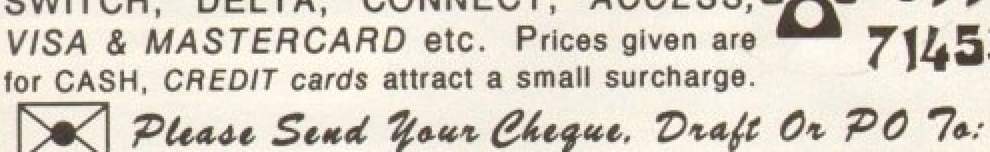
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A dazzling selection of goodies get the once-over from the *AC* team

NC-100/Lapcat

Although notepads have been around for a good ten years, up until recently there's been little to connect them to the Amiga. Thankfully this unfortunate situation is about to change thanks to a combination of Arnor's Lapcat and Amstrad's new NC-100 – a machine so simple, even Alan Sugar can use it...

In a rare break from tradition, the marketing claim of "five minutes or your money back" employed during the NC's advertising campaign is nothing short of understatement.

The whole system operates around a colour-coded hotkey setup which allows access to the wordprocessor, calculator, diary-calendar-clock, address book, plus a fully functional version of BBC Basic (whoopie!) and of course an alarm.

Obviously with a full-sized keyboard at your fingertips the wordprocessor has to be one of the highlights.

To be honest with the budget price tag I was ready for disappointment concerning the quality of the software. However I'm glad to say I was a pleasantly surprised.

For those of you who were wise enough to invest in the January issue of *AC*, wordprocessing with the NC will be just like home from home as a slightly cut-down version of Protext – our amazing giveaway – awaits within.

Although the words "cut down" may sound rather ominous this only refers to the 48,000 word dictionary as opposed to the 148,000 found on its bigger brother.

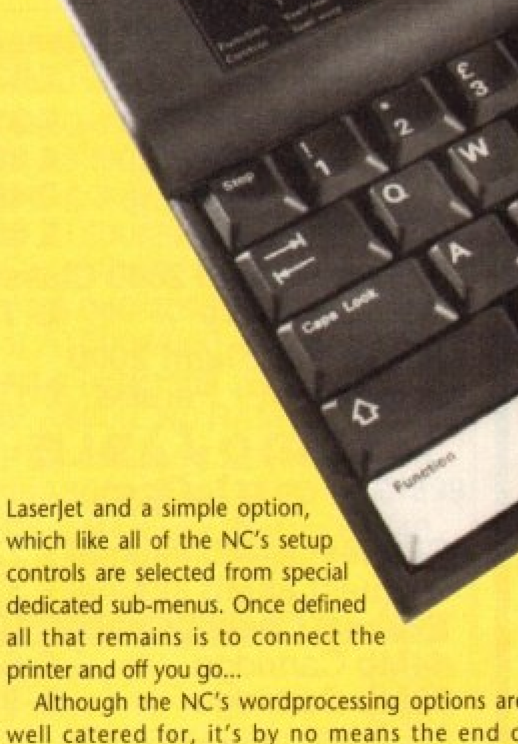
Other than this the software is almost identical with all the familiar hotkey combinations controlling everything from find and replace to text formatting plus the usual selection of Protext block operations.

Along with the hotkeys comes an assortment of Protext power options such as headers and footers, multiple markers, bold, italic and underlined, macro recording and just about everything else found on its Amiga counterpart.

An added bonus of the Arnor/Protext tie-up is that the Amiga and NC versions of Protext are completely compatible. As a result, if the Protext option is selected during transfer, all files sent will arrive complete with their style tags and formatting information intact.

Like any self-respecting wordprocessor, the NC also boasts a complete selection of printing options which include start and end definition, draft or NLQ, continuous, line and form feeds, selection of parallel or serial port with baud rate, parity, handshaking and data bit control.

In addition – and perhaps most important of all – comes a small but varied selection of printer drivers which include Epson 9 and 24-pins, Canon BJ10e, IBM 24, LaserJet and a simple option, which like all of the NC's setup controls are selected from special dedicated sub-menus. Once defined all that remains is to connect the printer and off you go...



Although the NC's wordprocessing options are very well catered for, it's by no means the end of the machine's data transportation skills, as the aforementioned address book also has full support for both sending and receiving data.

Alas the format of address book transfer isn't quite as simple as some, and as a result, simply dumping an existing address book from an existing Amiga database isn't easy.

Nevertheless the option still allows you to store and retrieve existing NC address book data to and from the

Merlin's Maths & Play Days

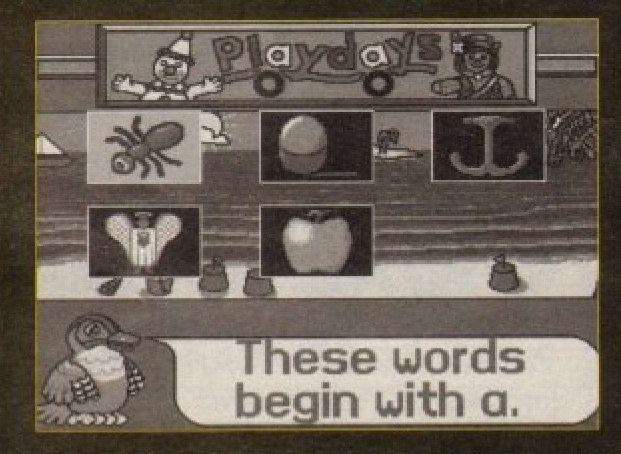
1992 saw quite a big explosion in the production of education software, with some really good releases such as ADI and Noddy's Playtime. But what are the new releases of 93 like?

Recently released is Merlin's Maths from the makers of ADI and Play Days, a child's education program which is to run in conjunction with the TV series of the same name.

I was very disappointed with Merlin's Maths. Graphically the game is perfect for children. All the sprites are clear and the text is easily readable but the actual activities that the pupils must perform are deadly boring.

The program opens up with colourful graphics which look good and would be attractive to children. There's plenty of movement – everything you should expect from an education program – but then it goes way downhill.

The first section is a simple mathematics game – the pupil must solve simple mathematical problems of increasing complexity. That's all well and good but it



just carries on and on until I eventually had to quit out and find a different section to try – there doesn't seem to be any cut-off point where the exercise will finish of its own accord.

The major challenge of kids' education software is keeping the child engaged, and so games must have some sort of reward every time a question is answered correctly. Merlin's maths doesn't have any such feature, just the occasional unimpressive graphical sequence.

My next disappointment was the similarity between the different modules. Two or more of them seem to run along the same lines for no apparent reason.

For the most part the sections rely on the child being able to count. If the child can, the rest of the exercises are a pointless. A poor release.

The second package I looked at was Play Days. I was disappointed again at first, but as the program unfolded my fears were allayed.

The program is controlled entirely by mouse but you never have to use a pointer, as the options you can take are in a grid at the bottom of the screen.

One of the options is always highlighted but by moving the mouse around you can change your choice. There is a good mix of disciplines – a couple of questions on maths then a couple of English questions – and plenty of picture and association work



Amiga with consummate ease. As you may see from the photograph, the NC is devoid of a floppy drive. As a result, some form of comms connection is essential and it's here where the Arnor connection comes in.

Aside from the software already mentioned, the NC also contains a copy of Lapcat, its own proprietary comms package developed in conjunction with Arnor and designed to make data transfer between the NC and any target machine as painless as possible.

In order to make the connection to the Amiga, all that's required is an Amiga-compatible version of Lapcat which can either be installed or loaded into the machine. The only remaining essential is the connecting parallel cable.

Unfortunately the aforesaid cable is far from standard so I'm afraid this means added expenditure in both software and cabling.

Once connected up, transfer is simply a matter of selecting the file of your choice whether it be a document or address book, running the Lapcat software on both Amiga and NC and then simply selecting the transfer medium of your choice, whether that be simple or Xmodem. If the phrase "comms" sends a shiver of technophobia down your spine, don't be put off, as like everything else within the NC's little world, transfer – whether it be docs or addresses – is extremely straightforward.

An added bonus of the Lapcat package and more precisely the cabling is that the special parallel cable required is totally generic to all machines and will work equally well on a PC, ST or anything else as it does on your Amiga.

As a result, to connect to the PC at work means you'll only require a PC version of the Lapcat software to make the connection with your existing cable.

If you're well versed in the ways of comms, it's not essential that you take the Lapcat approach, as alongside the two parallel Lapcat options – either Protext or Ascii – await an additional two serial options which once again comprise of both Protext or Ascii transfer formats.

By using the serial option, any suitable comms package could be pressed into service as an alternative to the Lapcat software/cable combination.

The only stumbling block concerning this option on the Amiga is that the serial connection the NC is a PC-style 9-pin – as opposed to the standard 25-pin used by the Amiga.

As a result, some form of 9-to-25-pin connector is needed, requiring either a degree of artistry with a soldering iron or a trip to your local computer centre.

With the correct cabling and a smattering of comms knowledge there's no reason why you couldn't side-step the expense of the Arnor alternative completely.

While on the subject of expense, it's time to talk expansion. Although the advertising campaign goes to great lengths extolling the simplistic virtues of the machine, there's no mention of what expanding the basic 38k of RAM means in financial terms.

To give you an idea of what 38k means, it equates to six and a half pages of the magazine, or 6,500 words of Ascii text.

Admittedly if you're only using the NC for occasional note taking it's fine. However, if you're planning to be away from your main machine for more than a few days, it won't be long before the NC insists you delete something before allowing you to make any further use of the unit.

An added problem is that everything within the NC is stored in communal RAM, so the larger your address book the less space is available for documents.

In order to combat memory starvation additional RAM, or in the case of the NC, SRAM, is going to be a must for many. This additional SRAM is supplied in the form of formattable PCMCIA cards which unlike those used the A600 and 1200 come with an on-board battery allowing them to retain their information even when the power is off.

Unfortunately the aforesaid cards are far from cheap retailing at roughly £45, £55, £75, £120 and £200 for the 64k, 128k, 256k, 512k and 1024k cards respectively.

As a consequence you're paying as much for a meg of RAM as you did for the machine itself.

Still having had my almost mandatory moan it must be said that even the fairly inexpensive 128k card would be more than enough for most users allowing both a sizeable collection of work in progress within the wordprocessor plus an address book large enough for the average individual.

Due to both the absence of an Amiga alternative and the excellent design and implementation of the NC, it's very difficult to find any substantial fault with what is a perfect solution to the problem of Amiga-related computing on the move.

With up to 40 hours from one set of batteries and of course unlimited life via the mains adaptor, it's hard to complain. The screen display isn't back-lit and as a result requires good lighting to remain usable, but it's a minor objection.

If you're got a real need for what the NC can offer it's literally the only viable choice for the serious Amiga user. Highly recommended...

NC suppliers: High street electrical retailers
Price: £199

Lapcat software and cabling combination: Arnor Ltd
Phone: 0733 68909
Price: £40



which will teach your child recognition and reasoning techniques.

Play Days is also geared toward the National Curriculum so that your child is getting a form of teaching which is going to be useful in the future.

Merlin's Maths
Supplier: Europress Software
Phone: 0625 859444
Price: £25.99

Play Days
Supplier: Alternative Software
Fax: 0977 790243
Price: £24.99



The Bug

Long gone are the days of the old plastic phallic symbol known as the joystick. Since about two years ago, the traditional design has been getting progressively stranger due to its development by the games companies.

A lot of this chopping and changing is probably due to the appearance of Megadrives and the like with their "joypads".

So what are they like, these new fangled joystick things? I laid my hands on the strangest one I could find to see if it lived up to the standards of traditional sticks.

To look at the Bug, it is downright ugly. It's an oblong shape with rounded corners and two lumps at one end where the Fire buttons protrude.

It sits in the palm of the hand with the two Fire buttons lined up with your middle finger and your index finger leaving the other hand free to manoeuvre the small stick which protrudes out of the top of the casing.

The Bug got a through beating with help from Kick Off II and the Aquatic Games. And loathe as I am to admit it, it did very well indeed. It's a very comfy stick and the casing seems pretty durable, plus you don't have to hunt around for a flat surface to place it on as it sits in the hand.

I found it a little too easy to move which made flight sims and the like a little hard to play. But it's an all-round good buy. I am a stickler for tradition but if the Bug is the one to supersede the old-style sticks, then good luck to it!

Supplier: Cheetah
Phone: 0222 867777
Price: £14.95

RocLite Disk Drive

External floppy drives always seem to have quite a low profile in the hardware market. What people don't seem to realise is that there have been a lot of important technological advancements in the things that you stuff your disks in all day long.

One of the most recent, not to mention the most impressive, is the RocLite external floppy drive. The first thing that hits you about the RocLite is the size – the thing is like a credit card. Standing 0.7in tall, the RocLite is probably the smallest drive I've ever seen. Where do they put everything?

The next thing that caught my eye was the low power consumption which will cut down on the drain on the main power supply and so those infinitely irritating Guru Meditation messages.

Everything about the drive shouts out quality – it's very quiet and has a through port so you can daisy-chain drives. But by far the most intriguing aspect of the drive is the anti-virus mode.

I first saw that the drive had some sort of extra feature when I had a quick look on the back of it. Instead of the usual on/off switch there were three settings. As it turns out, the extra setting is an anti-virus mode. How can a floppy drive stop you getting viruses on your machine? Well it doesn't, it just prevents viruses like the Gadaffi virus which plays a tune on your disk drive until it burns out the motor.

Supplier: RocLite
Phone: 0532 319057
Price: £66.95

Tiger Cub

Many people who would otherwise be quite interested in making music are put off by the apparent complexity of the whole process.

After all, computers are meant to make the creative path easier, not hinder it with compatibility problems and strange goings on which can hinder professionals, let alone the hapless home user.

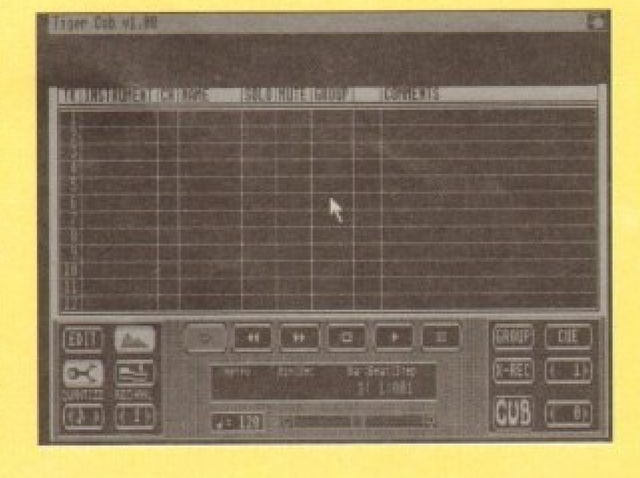
It is with this fact in mind that Dr T's music software, the people as guilty of techno-overkill as anyone with their incredibly complex KCS sequencer, have released Tiger Cub – "the music program for the rest of us", in their words.

The package comes in a sensibly-sized box, which contains the three disks (the program, some samples for you to use with it, and a disk of auxiliary stuff), a registration card (send it off!) and a small and well-written instruction manual.

It requires an Amiga with at least 1Mb of memory, and does not need Midi, although it fully supports it. Basically, whether your Amiga is big or small, Midi-ed up or not, Tiger Cub will be happy working with it.

If you have no Midi, it controls the four internal sound channels – which it is still happy to control when you've got any number of other instruments plugged in as well. This means that you can use your own samples in addition to any Midi instruments you may be using.

A fully-featured sequencer, Tiger Cub's ease of use is due to the fact that everything can be controlled by the mouse (in stark contrast to their KCS, which stands for Keyboard Controlled Sequencer) and that every aspect is designed to look as simple as possible and operate very straightforwardly. Like I say, it's not devoid of power features. You can print your compositions in standard musical notation and record in real-time (as you play) or step-time (by programming the notes and taking as long as you like to do it).



And there are highly intuitive and clear notes allowing you to add comments to instruments and voices, reminding you where they're used in your songs and which instrument they're played on.

But possibly the program's greatest asset is its membership of Dr T's Multi-Program Environment, or MPE.

MPE allows all of Dr T's music programs to interact with each other, and with more than 30 in the range, from synth editors to composition aids, Tiger Cub opens the door to a whole world of professional software, which you can buy as and when you feel you need or are ready for it.

Tiger Cub doesn't really challenge KCS, which it must be said is mare akin to the experienced user. The more you use KCS, the more you tend to find that keyboard control is the easiest way of interacting with it – it's just the initial learning of the keyboard controls which hinders all but experienced users of programs like KCS, and gives Tiger Cub its strength.

At the end of the day, being a member of a family of programs which can interact with each other will probably prove to be Tiger Cub's greatest strength.

Files produced by friends, or creative-but-not-computer–mad band members, can be loaded into Tiger Cub's bigger brother in the studio without trouble, and conversely professionally-produced music files can be messed with with the minimum of hassle – using Tiger Cub at home – by the less-than-genius fraternity.

Supplier: Silica Systems
Price: £99.95
Phone: 081-309 1111

Amiga 500 external RAM upgrade

I haven't seen one of these since the Power Computing instant 2Mb add-on a few months ago. If you've got an external hard drive then memory add-ons like these can be a godsend.

To look at, the RAM expansion looks like a very slim external hard drive. It slots into the DMA port on the side of your 500 just like most peripherals.

The version of the hardware we got was populated to 2Mb but you can upgrade the unit to anything up to 8Mb by adding SIMM chips. Alternatively you can buy the unit with as many megabytes as you wish.

A lot of people seem to be slightly baffled as to what a load of memory is useful for. Application are endless – many games will run better if you have more memory present and it comes in really handy if you're doing something like image processing, a very memory-intensive application.

We linked it up with a GVP hard drive and had a bit of

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You command the German army through intelligent army commanders against a computer opponent, developed over ten years, that commands the Russian army as competently as a human player.

Easy to use interface produces a fast paced game with the need to change army orders only when the player deems necessary. Written by Ken Wright, the most prolific author of strategy war games.

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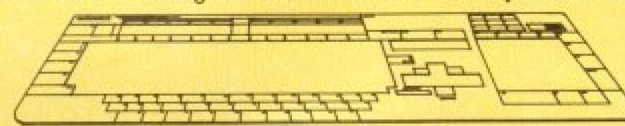
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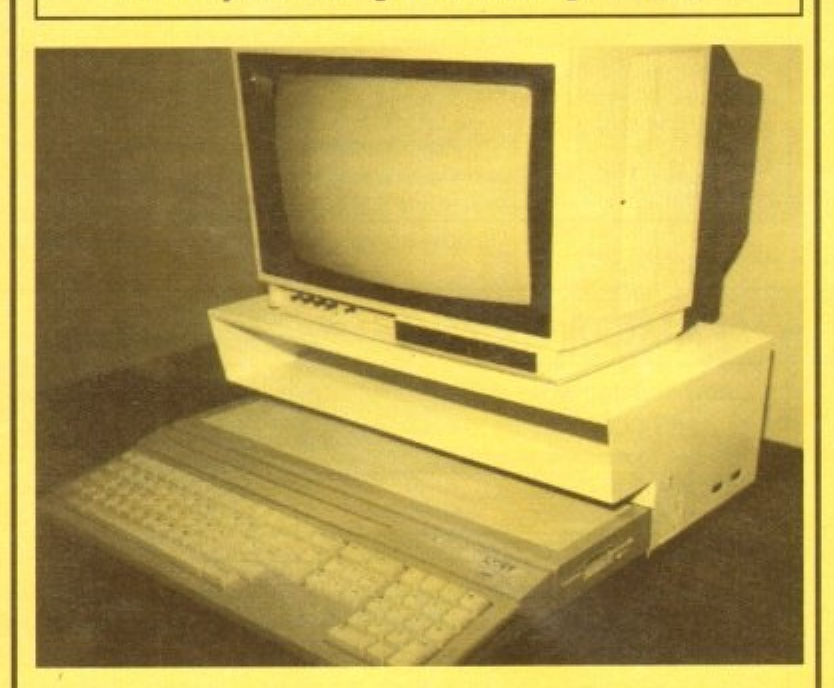
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trouble fitting the 500 on the desk afterwards, but no trouble setting up the expansion. To protect the internal board there is a plate hiding the through port which you have to unscrew.

I was quite baffled as to the significance of the LED on the front of the casing. It seems to be an access light like you have on hard drives to tell when the drive is being read. But why the thing has one I don't know.

You shouldn't have to worry about the power drain on your Amiga because if needed you can power the RAM expansion using an external power supply. It's definitely worth a look if you are having problems with lack of clout in your 500.

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1200 Hard Drive

Unlike the 500, the new Amiga 1200 really cannot fulfil its full potential unless you're nice to it and buy it a hard drive. But there aren't that many around but here at the *AC* offices we think we've got our hands on one of the best.

Trying to use the new A1200 Amiga without a hard drive is pretty laborious to say the least, but which one and what size? Well, first things first – you can only fit an IDE-controlled hard drive to the A1200 at the moment, but there several companies rushing to produce a SCSI interface for it.

IDE hard drives come in several different sizes from around 20Mb upwards but it's best to start with 60Mb at least, as 20 or 40Mb hard disks will soon be full, especially if you intend to do any graphical work with your machine.

The A1200 has a holder internally fitted for its hard drive, although if you fit it yourself you will invalidate your warranty, so it's recommended that you have your drive fitted by a Commodore-approved dealer.

Since the A1200 came out, quite a few companies have started offering hard drives specifically for this machine. Most reputable companies are offering a fitting service for a small fee which will not invalidated your warranty, and is definitely something to consider.

If you buy a drive from most good companies you will be supplied with the drive itself, a connecting cable and a instruction book on how to install the drive.

Even though this procedure invalidates your warranty, the job of fitting a drive is quite simple. To start, disconnect all cables from your machine, turn it upside-down and remove all the case screw.

Then turn your machine the right way up and gently remove the case. You will now be able to see the caddy on the left-hand side of the A1200 which holds the drive – remove this.

The next part is slightly more tricky, as you have to remove the metal screening which covers your A1200 circuit board. To do this you have to bend the little tabs which hold the casing in place until they are vertical, remove the two screws which hold the floppy disk drive in place, then unplug and remove the floppy.

Now you should be able to pull the metal shield straight upwards to remove it.

Once you have your A1200 stripped down you should be able to see a double row of parallel pins on the left-hand side of the circuit board – this is the IDE connector to which you connect the ribbon cable which was supplied with your drive.

You then have to thread the cable through the metal screening on the left-hand side, replace the screening and bend the tabs back to their original position.

Replace the floppy drive and then screw the hard drive to the caddy and replace it. Now simply connect the cable to the hard drive and finish off rebuilding your machine.

Now you have the hard drive installed you have to prepare it to hold your information. This would have been a simple job but contrary to the A1200's manual, Commodore do not include the install software.

We at *AC* had to use the install software from the A4000 Amiga. This can be tricky as when you run the program it is supposed to tell you all the information about the drive you have fitted, but when we tried it refused to look at the drive until we told the software that the drive installed was a SCSI and not an IDE.

This appears to be a software problem and is easy to overcome. When the software returns the information about your drive you can simple press the prep button and off you go.

Once you have prepped your drive you then have to reset your A1200 and load Workbench from floppy, highlighting the HD0: icon and selecting Format from the pull-down menus.

Once formatted you should be able to boot straight from your hard drive, when you've copied WorkBench to it.

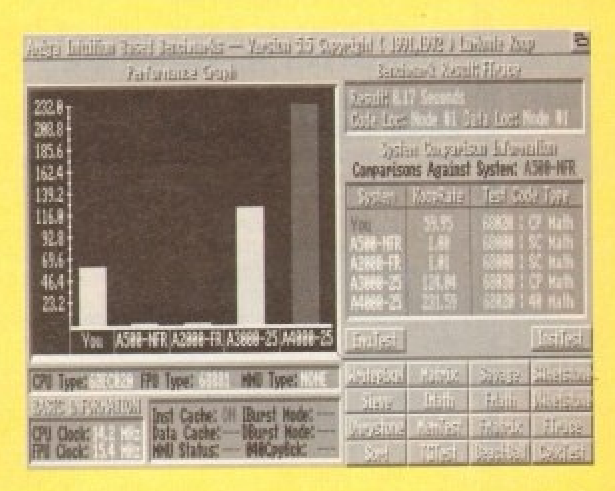
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MBX1200

The MBX1200 is one of the first FPU/memory boards available for the A1200. An FPU is basically a co-processor which is a chip specially designed to relieve the main processor of any maths-oriented work, this leaves the main processor to get on with other things.

The FPU in this board is designed to run at 14.7MHz which is the same speed as the A1200, but because the chip is specially designed for calculations it is capable of faster and more accurate maths. It is fitted with a Motorola 68881 but if you wish you can install a 68882.

There is also a slot to hold 32-bit SIMMs which come in either 2, 4 or 8Mb capacities. Thirty-two-bit SIMMs are



quite expensive so it's better to get the memory with the board as this works out cheaper than buying it at a later stage.

The board we tried had 4Mb of SIMMs fitted with a speed rating of 70ns. Fitting the MBX1200 is a simple job of turning your machine upside-down and removing the trap door then carefully slotting the MBX board on to the edge connector inside the A1200.

This procedure does not invalidate your warranty as you don't have to open the case of your machine.

Once fitted you wouldn't know it was there apart from the speed increase and the extra memory. There is no need to install any software or make any hardware alterations to your machine as when the board is fitted your machine re-configures itself.

One of the first things you notice when you reboot your machine after installing the board is the sudden appearance of lots of memory displayed at the top of your Workbench screen.

On standard Workbench stuff the FPU makes little difference, but try loading a ray tracing package and then watch it go.

We did some speed tests with the board installed and also without it the results speak for themselves. The software we used was Amiga Intuition-Based Benchmarks v5.5. When doing these types of test you also have to consider the speed of the memory chips install as these can make quite a difference.

The first test involved ray tracing a multicoloured beach ball without the board this took 517.98 seconds as opposed to 50.24 seconds with the board installed.

Next was FMath test this took 40.91 seconds without and 6.92 seconds with. Finally we tried the FTrace test which took 231.73 seconds without and 8.17 seconds with.

On the FTrace test the time with the FPU was a staggering 56 times faster than a standard A500, although this is only on maths-intensive work. As far as we could tell the board didn't give any incompatibility problems.

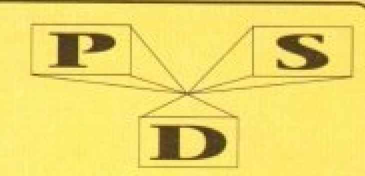
The conclusion is – if you do any type of work which involves your processor doing overtime, it's well worth a look at this board.

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G171 EAT MINE TWO (NP)
G172 EM MINE TWO (NP)
G173 EM MINE THREE (NP)
G174 EM MINE FOUR (NP)
G175 NO ONES MINES 1 (NP)
G176 NO ONES MINES 2 (NP)
G177 NO ONES MINES 3 (NP)
G178 NO ONES MINES 5 (NP)
G179 NO ONES MINES 6 (NP)
G180 NO ONES MINES 7 (NP)
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Software spotlight

In the search to separate turkeys from peacocks, this month's piercing gaze falls upon the ever-popular wordprocessing market

Protext 5.5

For long the Amiga's premier wordprocessor, Protext is still the most powerful, though lacking many of the features found in wysiwyg packages.

Protext is fast, contains a powerful built-in macro and command language, can produce invoices using its line drawing mode, and has many of the features you'll only otherwise find in a PC package, such as auto numbering and self-incrementing variables. For business users it is the only choice.

Disadvantages include its limited display (definitely not wysiwyg), its less than completely friendly interface, lack of graphics support, and overall complexity, so it is perhaps not the ideal choice for home users.

Ideal uses for Protext include invoicing, mail-outs (due to its powerful mail merging options), and the rapid generation of huge amounts of text (its simple display lends it the fastest typing speed of all Amiga WPs).

Supplier: Arnor
Phone: 0733 68909
Price: £80

Wordworth v2

Another British-produced program, Wordworth is a smooth, user-friendly wordprocessor with fewer power features than Protext but superb document design options and a finished output that's better than most.

Wordworth is one of the easiest WPs with which to generate PostScript documents, as it has full support for the standard and is supplied with 17 superb Agfa fonts.

It also comes complete with support for 140 individual printers, enabling full control of built-in printer fonts from within a document. The spell checker and thesaurus used is the Collins Linguibase (as used by Protext), so British spellings are the order of the day. Both work very well.

The program's disadvantages are that it can be memory hungry, offers no macro facility, and can sometimes run very slowly when memory is tight.

Not the best WP for the office, Wordworth 2 is better suited to the production of high quality PostScript documents including graphics.

Ideal uses for Wordworth include letter writing, important documents which have to look just right such as CVs, simple DTP tasks (its graphic support and PostScript options give it a definite advantage), and general home correspondence.

Supplier: Digita
Phone: 0395 270273
Price: £129.99

ProWrite 3.3

Having recently been price-slashed, ProWrite is a rather attractive buy for those in need of a general purpose WP. The problem with ProWrite is that it is just that – general purpose.

It is similar to Wordworth in that it is a full wysiwyg package with direct PostScript support and a lot of icons for standard functions. However, the PostScript option isn't as neatly implemented as the Digita offering, the program doesn't support built-in printer fonts, and it is slower, especially when HAM8 graphics are included in a document.

Having said all this, ProWrite is a perfectly usable package, and has the advantage of its ten user-definable macros which can be very useful with a bit of thought on the user's part. Like Wordworth, it has a good, though American, spell checker and word count, but it will also carry out calculations and automatically sort a list of words in alphabetical order.

ProWrite is best suited to the home user who prefers to save a few bob and isn't too bothered about speed of scrolling. For those people it represents a bargain at its present price and should serve well in its general purpose role.

Supplier: Silica Systems
Phone: 081-309 1111
Price: £79.99

excellence! 3.0

excellence!, which for some reason doesn't have a capital letter at the beginning of its title, is a huge sprawling package including a 140,000 word dictionary complete with definitions, a thesaurus, grammar checker, and PostScript support.

It sounds like great value for money, and in some ways it is, but excellence! is in many ways over the top and suffers in the basic areas as a result.

Advanced features include the ability to use multiple columns of text in a document, PostScript support using its own versions of popular fonts, automatic contents generation (of the others, only Protext does this), and graphic support. However, text scrolling speed is poor and the program uses a lot of memory.

For users worried about their presentation, excellence! is a good bet as the built-in grammar checker is powerful enough to spot most of the mistakes made by amateur wordsmiths. This feature also makes excellence! a tool many teachers and parents might consider.

Supplier: HB Marketing
Phone: 0753 686000
Price: £49.99

Final Copy II

Probably the most attractive looking wordprocessor around, FCII is fast, colourful, and slick. HAM8 graphics and DTP are the program's forte, and it has a number of features specifically aimed at making good presentation easier.

Like its predecessor, Pen Pal, the program has drawing tools available for designing page elements from within the wordprocessor, but in line with the main competition, all AGA graphics modes are supported.

Uniquely (at time of writing), FC II also displays 256 colour graphics on-screen, making it the best WP for colour printing, particularly PostScript printing.

FCII's main weaknesses are in the power wordprocessing areas, where several of the more advanced features found in some other packages are missing or not as well implemented. For basic wordprocessing and superbly colourful pseudo-DTP, Final Copy II is a good bet, but don't expect to write a magnum opus with it.

Supplier: Gordon Harwood
Phone: 0773 836781
Price: £99.95

Kindwords 2 and 3

Kindwords 2 was a seemingly revolutionary product on its release, as it was one of the first Amiga packages to offer wysiwyg, custom fonts for high quality printing, graphics in documents, and many other features now taken for granted in later WPs.

The reality, however, is that it was very slow, likely to crash on a 512k machine, and plagued by bugs. Recommended only for those with masochistic tendencies, Kindwords 2 should relay be allowed to die while it still has some dignity.

The *coup de grâce* comes in the form of Kindwords 3, a totally new product from the programmer of Wordworth. In effect, Kindwords 3 is Wordworth without the PostScript support, custom printer fonts, and many other advanced features.

What the programmers left in makes Kindwords 3 a friendly, very usable WP available for a decent price. It has all the style and functionality of Wordworth even if it lacks the power features, and would serve most general home uses very well.

Supplier: The Disc Company
Phone: 0926 815855
Price: £49.99



HARD TIMES

Is the A1200 the ultimate budget answer to Amiga art or would existing Amiga owners be better served by a dedicated display device? Hard Times has the answers...

With the jaw-dropping quality of the AGA chipset; the question often asked by many is why bother with a 24-bit board when you can buy a complete machine for the same price or less?

Well in truth it's a very valid point – for many potential buyers the heyday of the bog standard 24-bit board is long gone. However, if you have certain needs a true 24-bit display can still hold the high ground in several areas.

Not least is compatibility with existing kit. If like me you have a range of hardware all based around old but nevertheless fast and effective equipment, replacing everything from the ground up isn't a very attractive proposition.

After all, who wants to throw away perfectly good hard disks and accelerators just to get the AGA?

If indeed as there are advantages with a standalone system, what are they? After all few will ever need higher resolution and clarity than the incredible output of Ham8.

However, the aforesaid format does have its faults, not least of which concerns the animation of full and video spec screens which can be painfully slow especially in the higher Ham8 resolutions.

In addition, like Ham of old the new format reacts very badly if employed as a backdrop. In other words Ham8s are pretty useless unless they're either static or part of a self-contained series of anim frames.

You cannot for example use Ham8 images as Scala or Workbench backdrops with text, windows, pointers or anims flying over them. Such backdrops are strictly 256 colours or lower – which incidentally provides a lot of scope for logo anims and titling.

DCTV

The Digital Creations DCTV system is perhaps the ultimate compromise between the pure image quality of a true 24-bit system and the useability of the Amiga's standard display modes which formerly and still to some extent sacrifice colours for added flexibility.

Unlike all the other 24-bit systems, DCTV does not employ the ultimate quality offered via an RGB signal, but rather uses the lesser talents of a composite signal with which to display its wares.

It's here where the compromise is made with numerous swings and roundabouts of assorted advantages and drawbacks building up the overall DCTV picture – excuse the pun.

On the plus side, the board's composite-only output is ideal for the average user whose creations are destined for video from the outset.

Numerous packages including VistaPro, Imagine, Real 3D all support the DCTV file format as standard and will happily render an entire animation on demand.

Another huge advantage for the those making their first tentative and invariably expensive steps in serious Amiga art is the file size of DCTV images.

As a rule, a DCTV image is roughly a tenth of the size of an equivalent 24-bit IFF. For those with limited means and storage this alone makes DCTV an attractive option.

On the display side the system again scores well with a maximum colour range around the four million mark. Although this may seem rather lacking in comparison to the 16.7 of a true 24-bit display, it's more than enough for even the most demanding video display.

For example an image of 736 x 580 at worst would require 426,880 colours assuming, every pixel was a separate colour – thank God that never happens!

With the combination of greatly enhanced colour and its relatively minuscule file size, animation is almost inevitable. DCTV attains its amazingly small file size by emulating a hi-res 16 or eight-colour image which then has a special header appended which the hardware decodes prior to display – thereby adding the additional colour information.

This decoding process is the system's only downfall during animation as it takes time to decode each image, as a result slowing the frame rate of the anim.

On the plus side, the alternative format of three bitplanes achieves around 25fps which is equal to that of normal video. Alas here lies another compromise as the missing bitplane means a drop in quality as the system works with an enhanced eight-colour hi-res image producing harsher transitions within graduated regions of colour.

However, even with this slight compromise, DCTV animation in three bitplanes is still very impressive and is widely accepted as the next best thing to still frame recording thanks to its combination of colour and anim speed.

In addition, the system comes with one of the better paint packages which includes the ability to make 24-bit frame grabs from freeze-framed video. All in all an excellent investment and ideal for the dedicated videographic animators.

Supplier: Silica Systems
Phone: 081 309 1111
Price: £399

AVideo

Like DCTV, Avideo is a compromise between cost and performance. Unlike the DCTV, Avideo uses a true 24-bit RGB display which means much sharper images than ever could be achieved via its composite-only counterpart.

To the credit of the Avideo system it was one of the first boards to attempt full integration into the overall Amiga environment. For example it allows the display of the board to be used as a backdrop into which standard Amiga displays can be overlaid.

For multimedia applications this can be of vital importance as programs such as Scala can be overlaid over a vastly enhanced background. Alternatively animation can benefit as standard Amiga anims can be employed above the backdrop with equal ease.

In addition Avideo will accept the services of a genlock to further glam up your creations. As if that's not all, the board also boasts TVPaint 1.8, which is widely regarded as the best paint package on any board.

With all the above and a price not much more than DCTV it all sounds a bit to good to be true, but as ever our old friend compromise rears its ugly head.

Unlike power boards such as Opalvision and the Harlequin, Avideo has one quirk which blots its otherwise impressive copybook.

When animating and painting, the system operates exclusively in its 12-bit mode which means hi-res 4,096 true colours that results in a degree of quality way above that of old style lo-res fringe-ridden Ham, but nevertheless well below that of hi-res Ham8.

However although 12-bit is the working mode it is possible to jump into 24-bit for preview within TVPaint when necessary. Another limitation is that anims are strictly 12-bit which means the inevitable stepping on gradients and even worse a maximum frame rate of 15 fps in the lowest resolution and a mere 12 fps in the maximum.

In short, Avideo is an excellent painting environment for statics and as a platform for multimedia applications but is lacking somewhat as an animating environment.

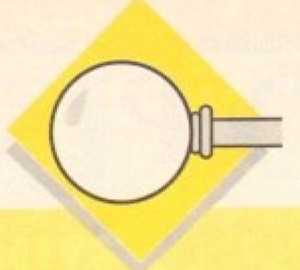


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Phone: 081 909 2092
Price: £299

AMIGA COMPUTING

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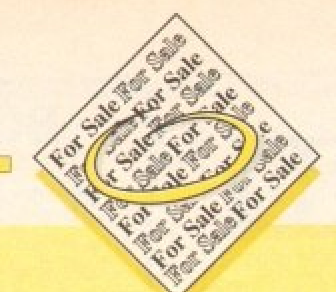
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HB Marketing																															●		
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Hobbyte	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●			●	●	●		
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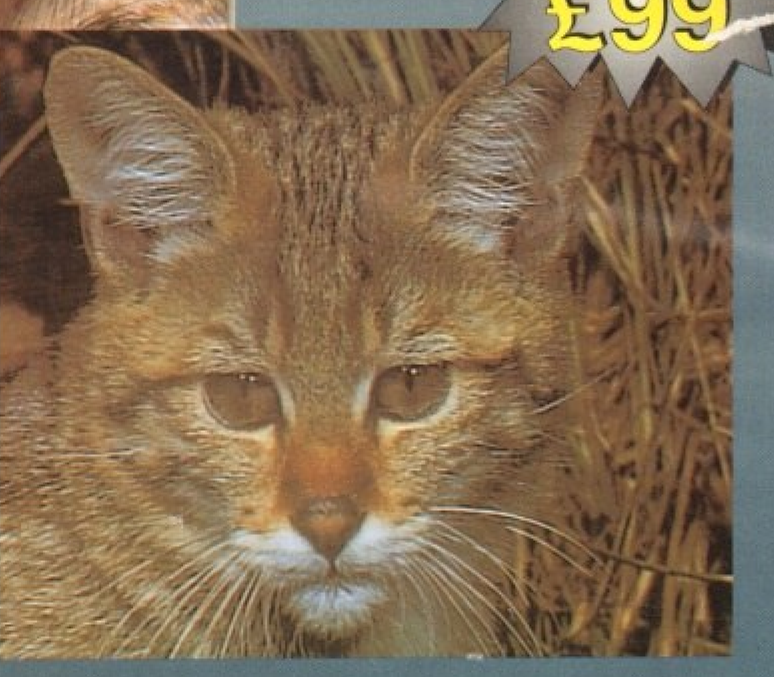
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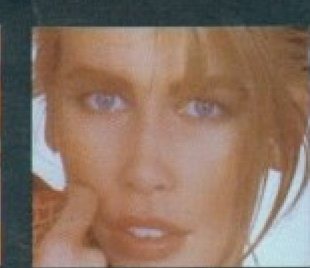
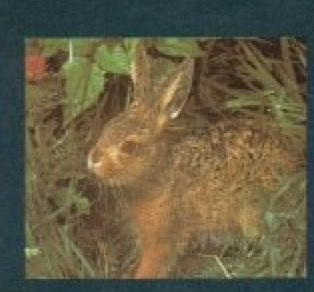
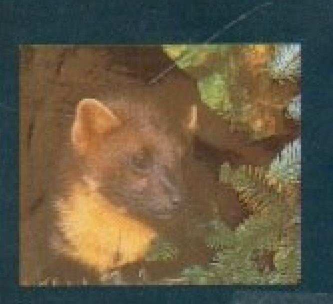


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